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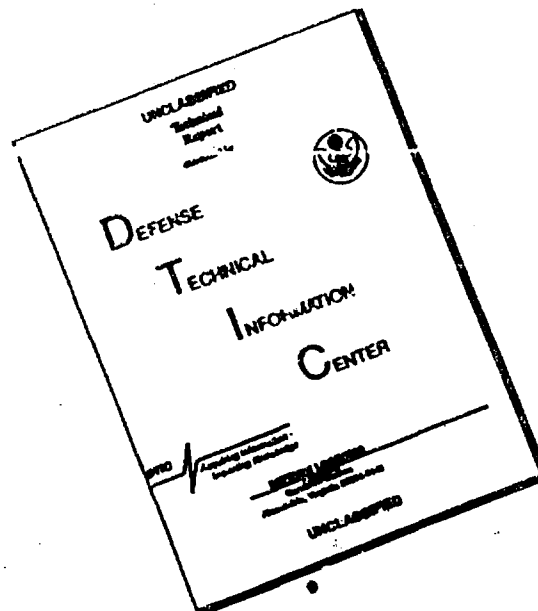
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**TECHNOLOGY INSERTION-ENGINEERING SERVICES  
PROCESS CHARACTERIZATION  
TASK ORDER NO. 1  
(BLOCK II)**

**DATABASE DOCUMENTATION BOOK**

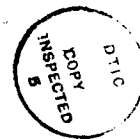
**OC-ALC**

**MATPCA**

**CONTRACT SUMMARY REPORT  
11 SEPTEMBER 1989**

**CONTRACT NO. F33600-88-D-0567  
CDRL SEQUENCE NO. B008**

|     |  |    |
|-----|--|----|
| A-1 |  | 23 |
|-----|--|----|



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*McDonnell Douglas Missile Systems Company*  
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## 1.0 IDENTIFICATION OF RCC

MATPCA is separated into two sections, each having its own workload and personnel. The two sections are physically separated by an eight foot isle which runs between them. The two sections share storage cabinets and some test equipment, but otherwise exist as separate entities, each having its own supervisor. Workloads appear to be divided equitably based on existing staffing.

The first section's workload consists mostly of ignition exciters, temp. probes, electrically actuated valves, and associated electrical accessories. The work area is somewhat crowded with test equipment and work benches, much of which is not being utilized due to the present workload levels. The existing facilities would be capable of processing a much greater workload given the needed staffing. This section contains 6,250 square feet of floor space.

The second section's workload is mostly made up of temperature amplifiers, servo-motors, and power supplies. Again, the area contains several benches and testing equipment which is not being utilized at their full potential given the present workload. The section contains 2,875 square feet of floor space.

Note that MISTR items are normally delivered to an outside storage area in building 3123. Technicians normally are sent to this area once a week to uncrate accessories and load them onto a transport trailer.





## 2.0 GENERAL INFORMATION

MATPCA is an electrical accessories repair unit within the Accessories Division Production Branch at OC-ALC. This RCC is located in building 3001.

The primary responsibility of MATPCA is to overhaul, repair, and bench test motors, exciters, power supplies, servo-motors, and a variety of aircraft and engine electrical accessories. The primary workload in this RCC consists of MISTR and PDM items, with the PDM accessories being worked mainly as support for the engine overhaul unit at OC-ALC.

The workload of MATPCA has been relatively stable for the last several years, but it should be mentioned that production levels for recent months has been lower due to decreasing demand for certain aircraft parts. MATPCA has historically worked electrical accessory parts for the A-7, F-4, and B-52 aircraft. As these aircraft are phased out of the active Air Force inventory, demand for overhaul and repair work has decreased. We may expect to see production levels increase as new electrical accessories from aircraft such as the F-16 and B-1 enter the depot system. It must be emphasized that MATPCA is in a transition period between the old and new aircraft technologies, and that a definitive workload analysis would need to account for the changing patterns of processed parts.

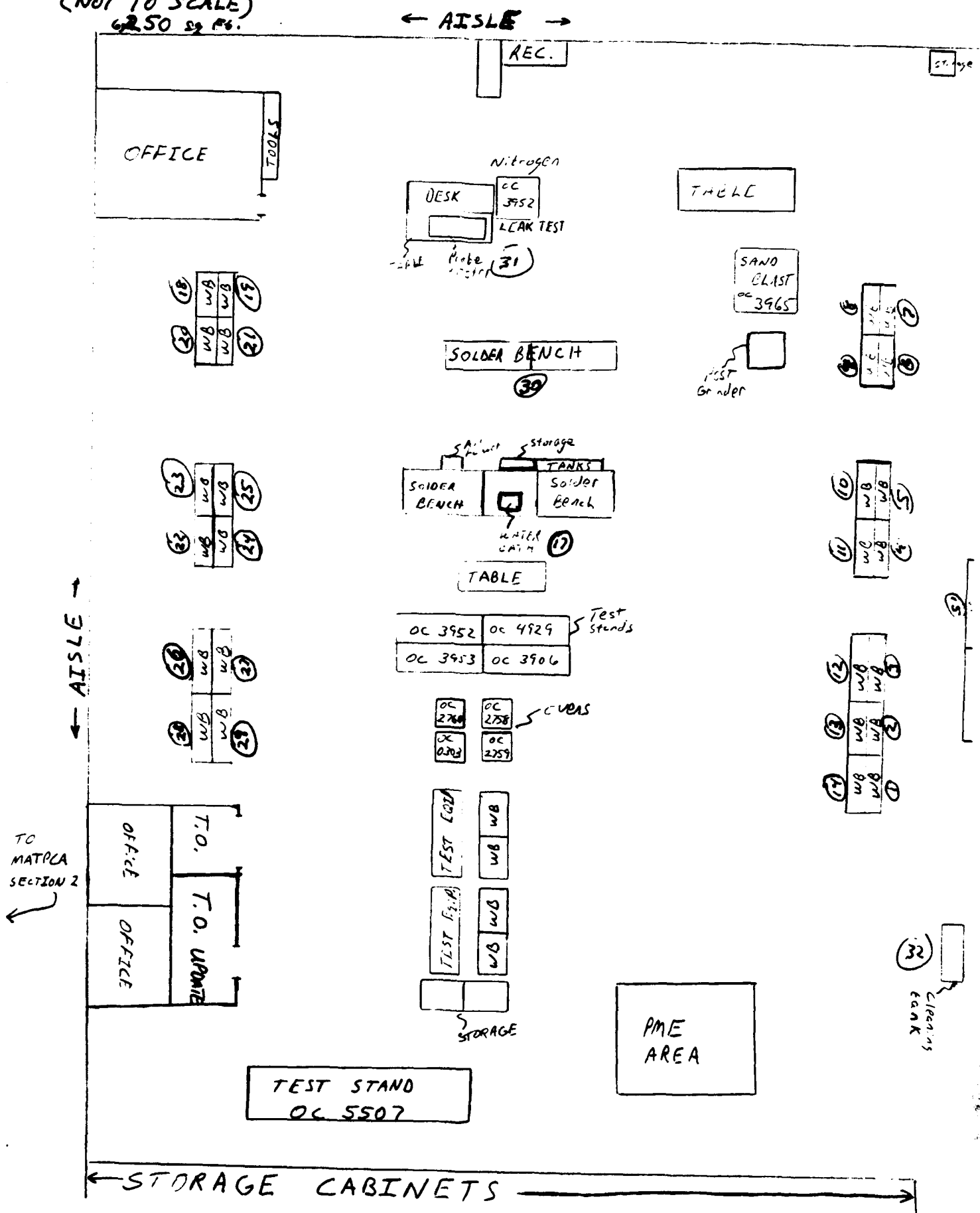


## 2.1 FACILITY LAYOUT DRAWING

The existing facility layout drawings are not representative of the present conditions. There have been changes to the shop floor as well as a restructuring of the MATPCA RCC. The attached layouts are representative of the present conditions.



2.7 A MATPCA  
SECTION 1  
(NOT TO SCALE)  
6250 sq ft.





THIS AREA SHARED  
WITH MATPCC

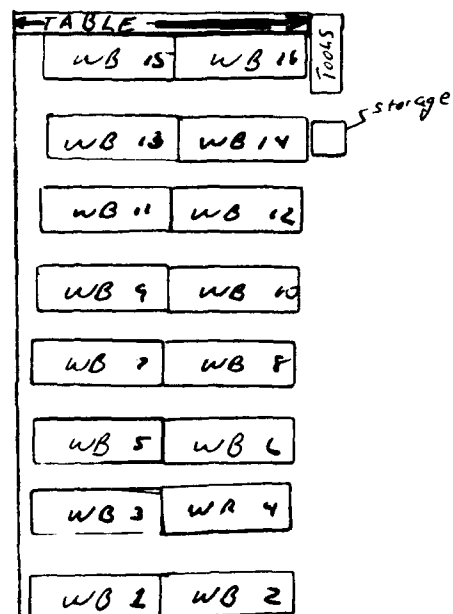
Solder  
Bench

OC 4905

Fume  
hood

WB 17 WB 18

← AISLE →



TEST STAND  
OC 4905

storage

STORAGE CAB.  
WB  
DESK

TEST STAND  
OC 4946

TO MATP  
SECT 2

← AISLE →

storage

OC  
4285

STORAGE CABINETS

OC  
4285

WB 8M

WB 8M

TABLE

storage

TABLE

← AISLE →

2,875 sq ft.

2.7B MATPCA  
SECTION 2  
(NOT TO SCALE)



## 2.2 EQUIPMENT

Equipment presently used in the MATPCA RCC consists of a variety of electrical test stands, common electrical testing equipment such as oscilloscope, ohmmeters, meggers, etc., and both common and specialized hand tools.

The test stands used in this RCC range from four to thirty years old, with much of the equipment being at least twenty years old. It is somewhat surprising that newer equipment purchased in the last five years to support repair and testing of B-1 and F-16 electrical accessories shows a much higher rate of downtime and repair requests than does the older equipment.

A detailed listing of the equipment used in MATPCA is included in the equipment profile, which is enclosed in this report.

## 2.3 WORKFORCE

MATPCA has a relatively stable workforce with little variance. Workloads are well defined and personnel appear knowledgeable about their tasks. The workforce is comprised of two supervisors, 32 Journeyman technicians, a sandblast technician, and a painter. The following is a breakdown of the manpower in the MATPCA RCC.



| <u>SKILL CODE</u> | <u>SKILL LEVEL</u> | <u>QUANTITY</u> | <u>EXPERIENCE</u> |
|-------------------|--------------------|-----------------|-------------------|
| AY                | WG-10              | 5               | 12                |
|                   | WG-9               | 6               | 8                 |
| BY                | WG-10              | 10              | 7                 |
|                   | WG-9               | 10              | 4                 |
|                   | WG-7               | 2               | 6                 |
| B3                | WG-7               | 1               | 2                 |

Experience is given as average years at that grade. Note that MATPCA is supported by two backshops, MATPCM machine shop and MATPIW welding shop.

## 2.4 REPAIR PROCESS TECHNOLOGIES

The repair process technology in MATPCA consists of testing and repair of aircraft and aircraft engine electrical accessories.

Accessories are tested for function and specification requirements, and overhaul is performed as required. Modifications are made to existing items as required by tech order changes and to meet the present configuration required for targeted aircraft.

When applicable, repairs are made to internal components of the worked accessories, as well testing,



replacement of defective parts, and inspection of problems requiring backshop support.

## 2.5 WORKLOAD VOLUME AND MIX

The workload within MATPCA consists of both MISTR and PDM. Electrical accessories sent to the engine overhaul facility at OC-ALC is a PDM workload. All other items tested and/or overhauled are MISTR designated.

Workloads are variable and depend on Air Force inventory needs. For more information see the enclosed workload profile.

## 2.6 MATERIAL HANDLING

Material handling in MATPCA is mostly by hand. Material is initially received in building 3123. Technicians are sent to this area to uncrate received items and place them on a specially suspended trailer. A tug driver is then called to move the items to Bld. 3001 where they are placed in storage cabinets. This procedure is normally performed once a week and requires approximately four hours of the skilled technician's time.



## 2.7 STORAGE

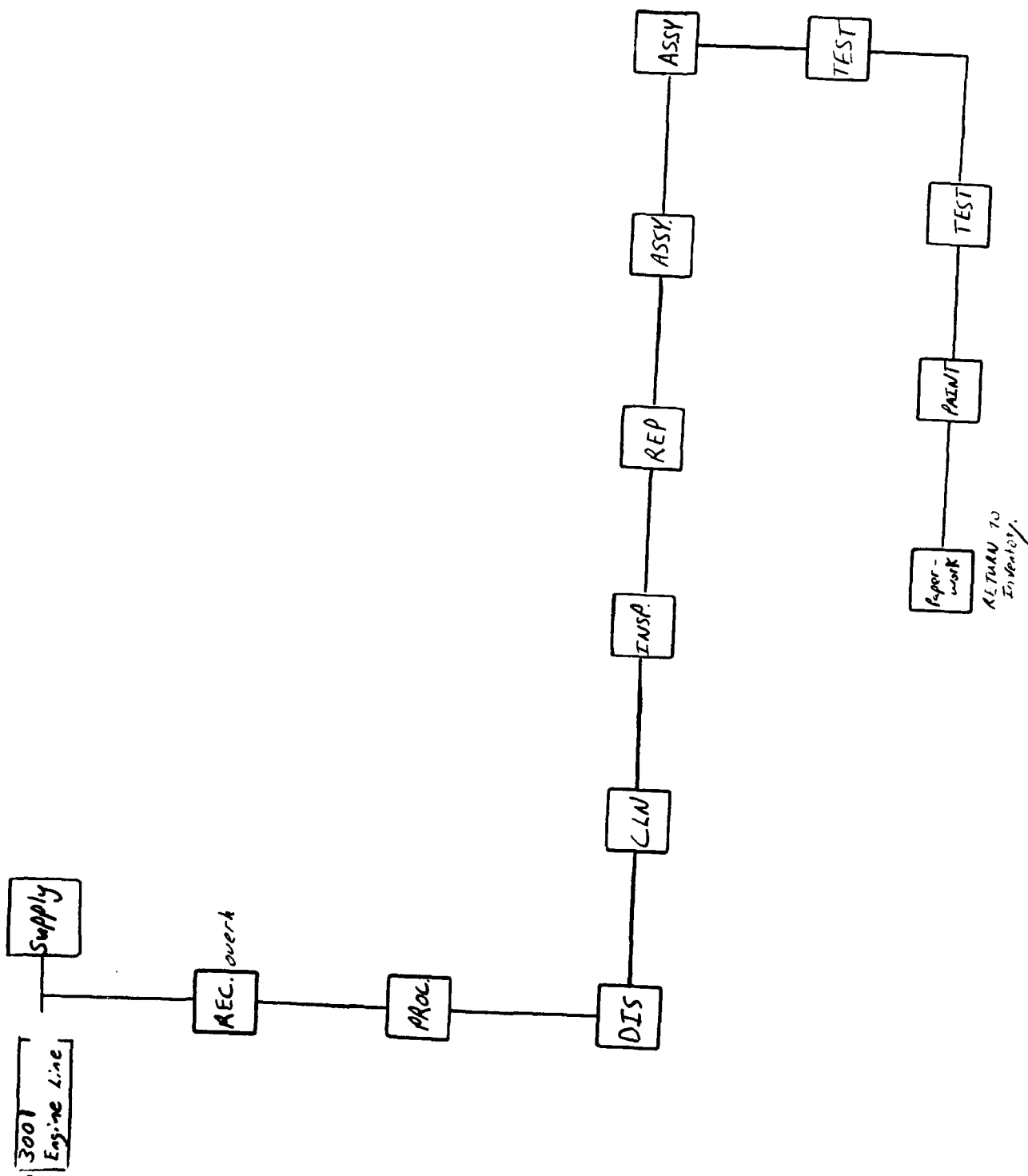
Storage in the MATPCA area consists of 76 cabinets that are 6x3x2 feet in size. These cabinets are located throughout the MATPCA shop area as shown on the facility layout drawing enclosed.



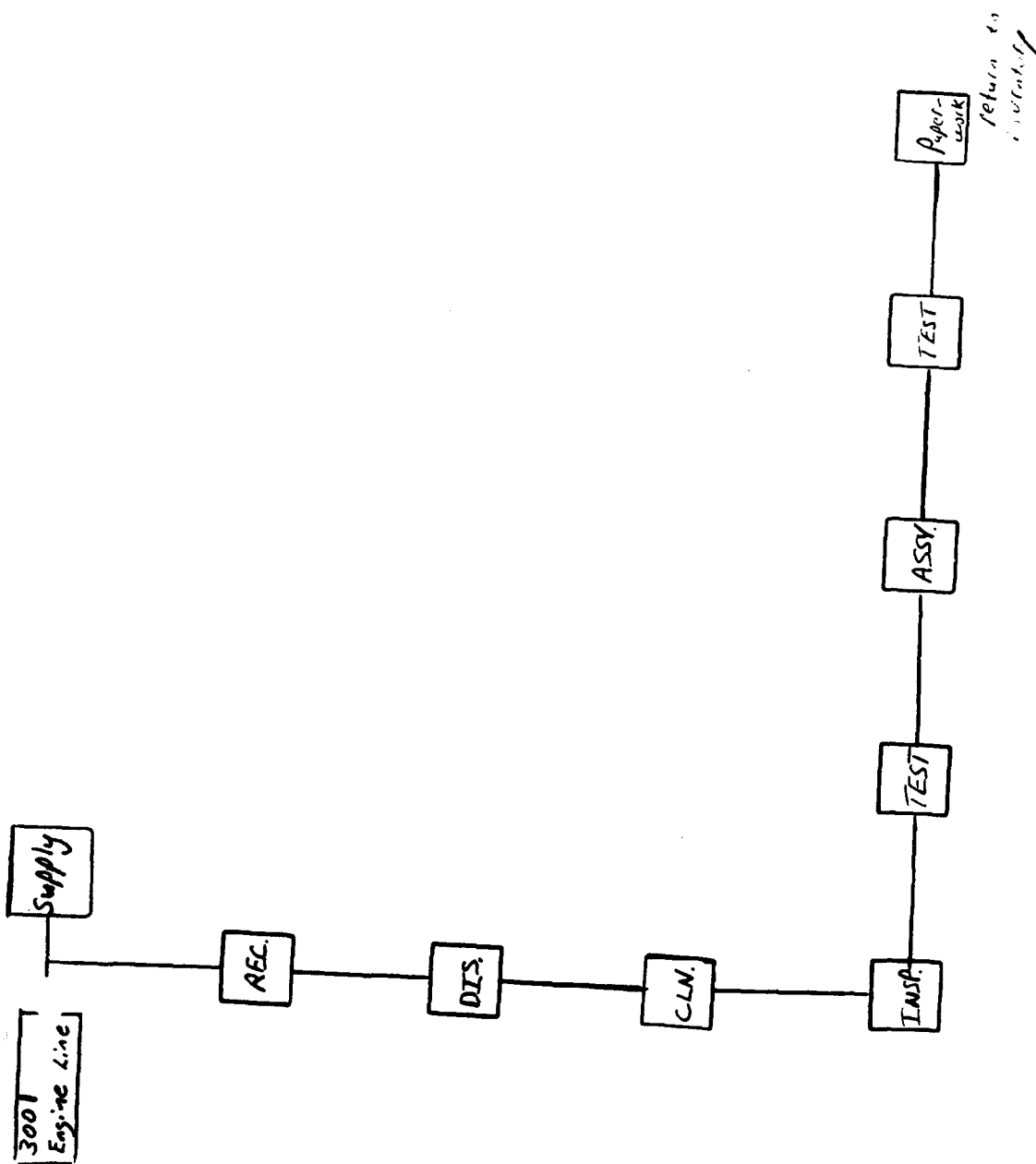
## 2.8 PROCESS FLOW DIAGRAMS

The following process flow diagrams are representative of the operations required to test and/or overhaul the various items worked by the MATPCA Accessories RCC. The items have been divided into family groups (i.e., like items in regard to designation and function). Operations shown often represent a logical combination of similar and related tasks. For more detailed analysis of the processes studied, please refer to the appropriate operation profile packet (enclosed).

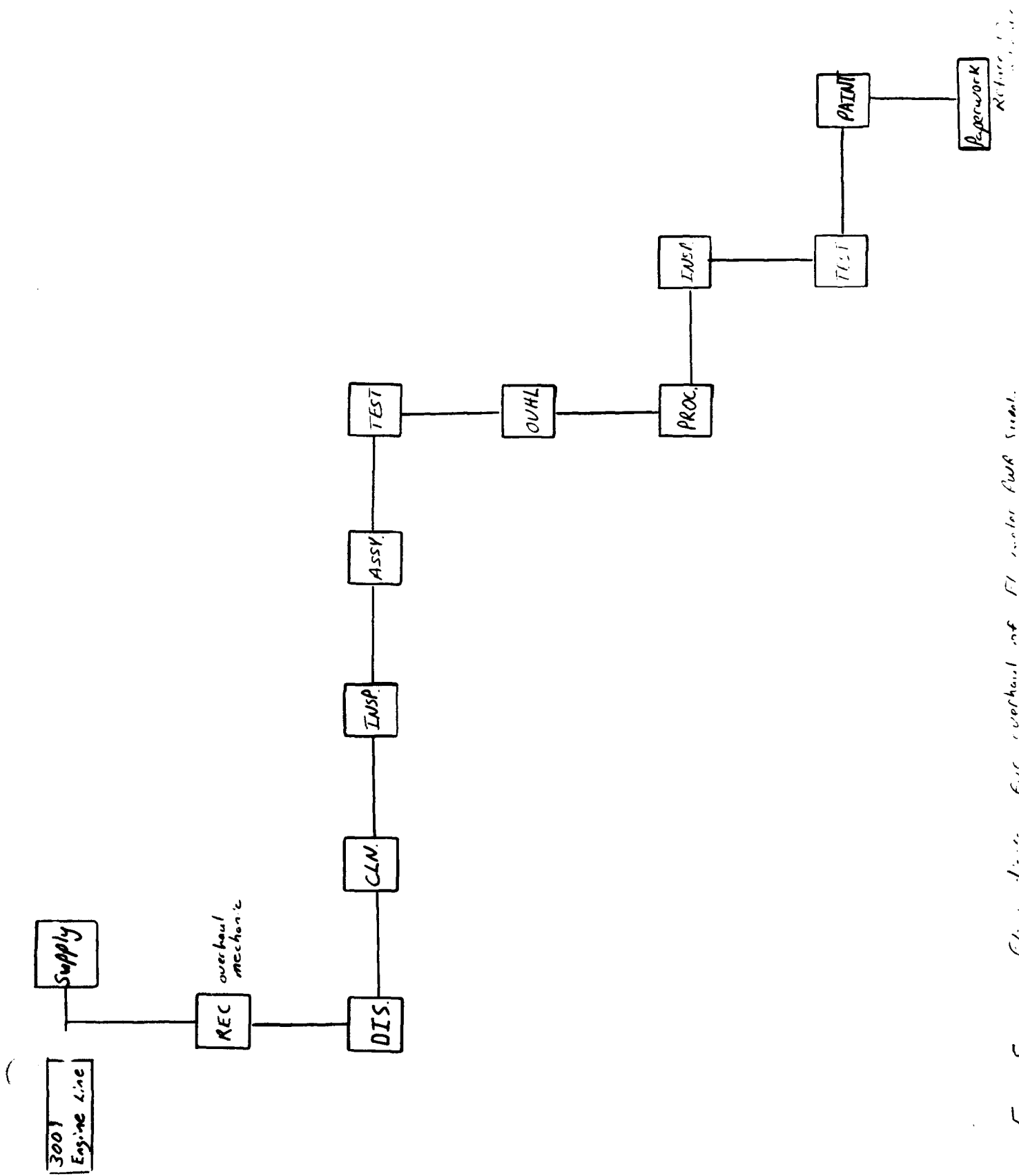




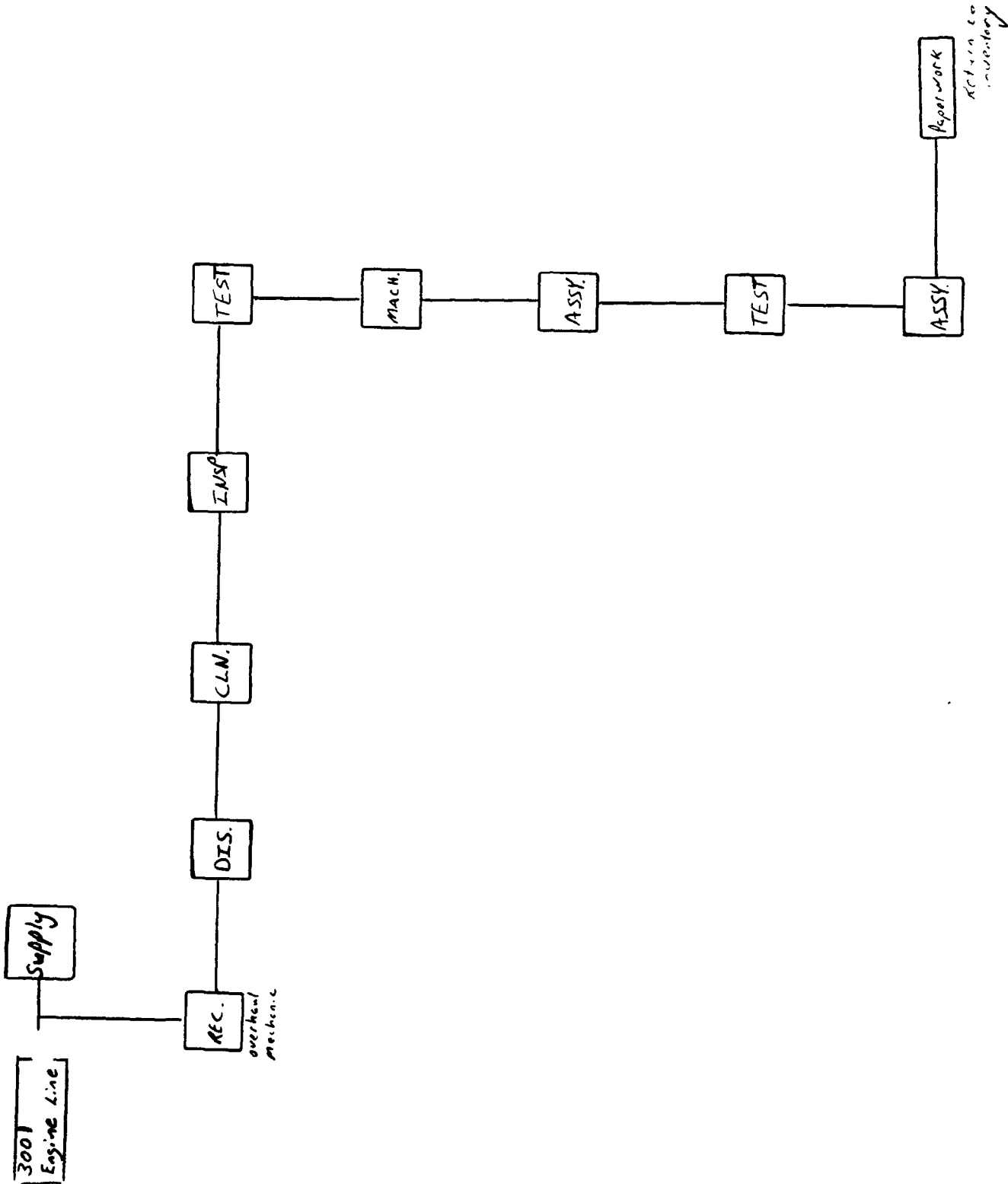




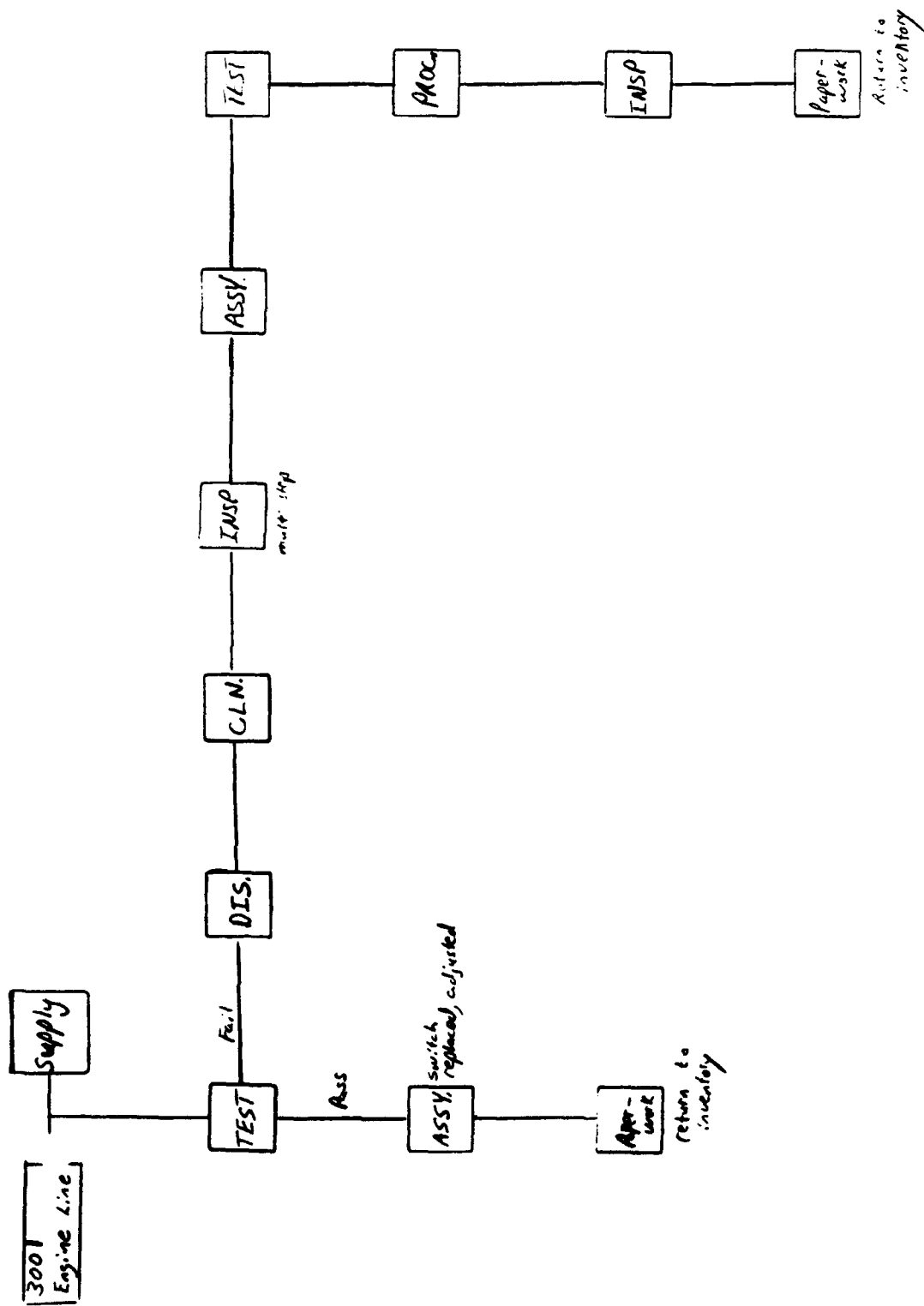








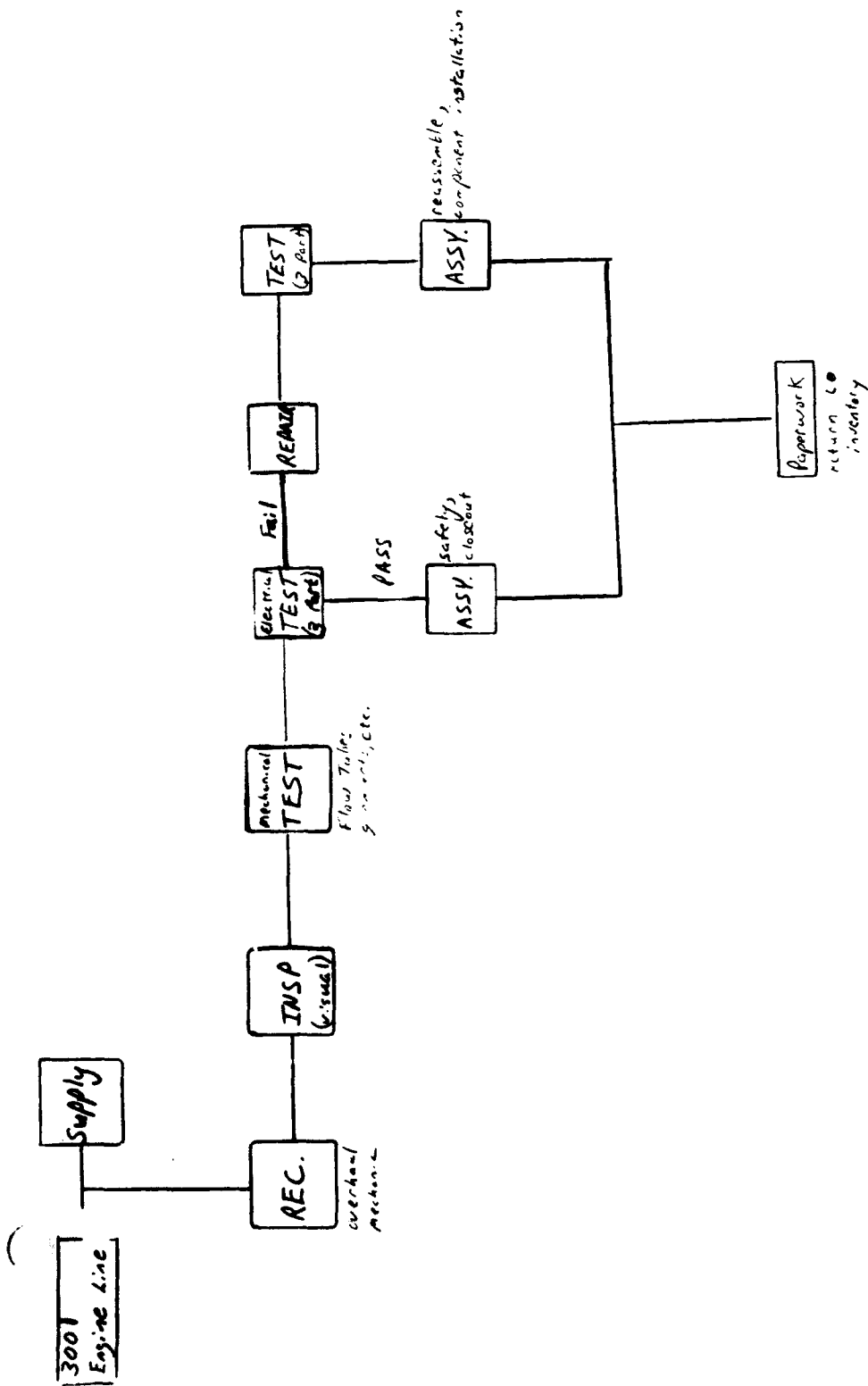




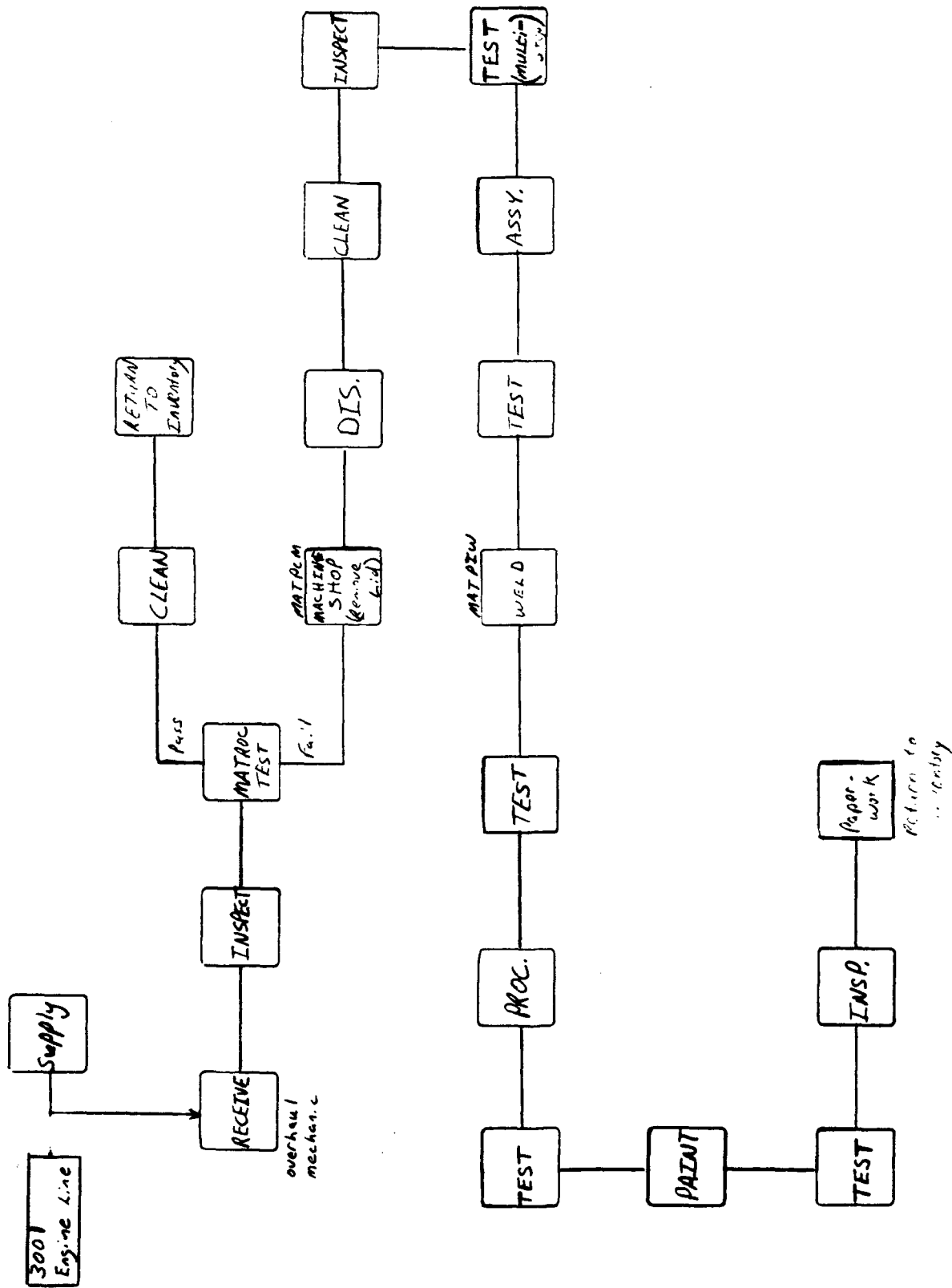
*[Handwritten notes:]*

7000  
6000  
5000  
4000  
3000  
2000  
1000  
0











### 3.0 80/20 WORKLOAD ANALYSIS

An 80/20 analysis was previously performed for MATPCA using information obtained from AFLC "TOP DOLLAR ITEM" lists. These lists assumedly weighted the items on the basis of earned hours reported for each control number worked. In the case of MATPCA, this list proved dated, with several of the PCNs having been reassigned to other RCCs. An updated list was formed by reviewing the recent history of items processed, and replacing those PCNs that were no longer relevant with presently processed items of equal or greater earned hours. The following is the updated list of those part control numbers identified as representing 80% of MATPCA's present workload:

| <u>CONTROL NUMBER</u> | <u>WCD NAME</u> |
|-----------------------|-----------------|
| 35023A                | CAEY10          |
| 98093A                | CAEC11          |
| 34253A                | CAAC24          |
| 37719A                | CAA001          |
| 38718A                | CAEM02          |
| 38645A                | CAEM08          |
| 30241A                | CAEB05          |
| 34044A                | CAEC04          |
| 49711A                | CAEC07          |
| *35111A               | CAEZ08          |
| 34128A                | CAEY08          |
| 98001A                | CAEC07          |



|         |        |
|---------|--------|
| 38694A  | CAEM09 |
| 50217A  | CAEA01 |
| 50078A  | CAEZ05 |
| 38669A  | CAEM03 |
| 35510A  | CAEY12 |
| 31151A  | CA2222 |
| 30056A  | CAEZ03 |
| *34252A | CAAC02 |
| *34551A | CAEZ04 |
| *35113A | CAEZ02 |
| 38643A  | CAEM04 |
| 49315A  | CAEY09 |
| 61234A  | CAEC05 |
| *35033A | CAEY11 |
| *97133A | CAEB08 |
| 50297A  | CAEM22 |

\* These are the PCNs that were placed on this list in order to update it to present conditions observed in MATPCA.

### 3.1 VALIDATION

Validation of the 80/20 list was performed as described in the preceding section. The updated list is believed to be representative of the MATPCA workload.



#### 4.0 DATA COLLECTION

Of the data profile sheets collected, the following were found to be applicable to the MATPCA RCC:

- Operation Profile
- Manpower Profile
- Equipment Profile

Disassembly/Assembly Profiles and Parallel Process Profiles were not applicable to this RCC due to the nature of the work performed. All information represented on the operation profile sheets was developed primarily from information provided by the interviewed technicians. Manpower availability and equipment profile information was provided by shop supervisors.

#### 4.1 DATA COLLECTION PROCESS

Each control number identified on the 80/20 list had an operation profile developed for it. The applicable shop foreman identified the technician most familiar with the item being studied, and an interview was performed to determine the relevant operations and their associated time requirements.

Please note that while a specific WCD (work control document) is the primary paperwork associated with any particular item's control number, this WCD can not be



regarded as an accurate description of the actual operations required for testing and overhaul of that item. The WCD should instead be considered as only a tracking device for the existing PAC certification program.



# WORKLOAD PT FILE

| NAME <u>HUGGINS, Duane</u> ALC OKto 6-7-1 DATE <u>19 April 89</u> RCC <u>MATPCN</u> SHEET <u>1</u> OF <u>1</u> |                |        |               |                |                              |     |     |    |                      |              |                |
|--|----------------|--------|---------------|----------------|------------------------------|-----|-----|----|----------------------|--------------|----------------|
| ITEM NUMBER  | AIRCRAFT MODEL | WCD    | WORKLOAD TYPE | FLOATING STOCK | ACTUAL PRODUCTION BY QUARTER |     |     |    | NO. OF ENVELOP UNITS | MAXIMUM WLP. | STANDARD HOURS |
|  |                |        |               |                | 1                            | 2   | 3   | 4  |                      |              |                |
| PCH 34253A<br>NSN 6130007728567<br>PIN 173516NAC   | 135            | CAPC24 | 4             | 0              | 144                          | 177 |     |    | N/A                  | 20           | 3.8            |
| PCH 37719A<br>NSN 66100022-1343<br>PIN 601128  | 130            | CAAG01 | 4             |                | 124                          | 121 | 155 | 10 | N/A                  | 30           | 7.2            |
| PCH 38695A<br>NSN 24150013720074L<br>PIN 635E49D G 01  | F4<br>J79 F-4  | CAEM08 | 4             |                | 65                           |     |     |    | N/A                  | 15           | 7.9            |
| PCH 35042A<br>NSN 6610000832455<br>PIN 311014168   | F4<br>J79 F-4  | CAEM04 | 4             |                | 47                           | 40  | 57  | 25 | N/A                  | 10           | 7.5            |
| PCH 35113A<br>NSN 2425001565633CN<br>PIN 6869188   | A7<br>TFU1049  | CAE202 | 4             |                | 27                           | 40  | 30  |    | N/A                  | 8            | 3.5            |
| PCH 35111A<br>NSN 2425002285485CN<br>PIN 10-362470-3   | A7<br>TFU1049  | CAE201 | 4             |                |                              | 37  | 30  |    | N/A                  | 10           | 2.5            |
| PCH 34253A<br>NSN 6130007728566<br>PIN 873512AA4   | 135            | CAEC0- | 4             |                | 40                           | 15  |     |    | N/A                  | 20           | 1.8            |
| PCH 31151A<br>NSN 1450000688002<br>PIN 632830K   | C51D           | CANV01 | 4             |                | 90                           | 43  | 80  | 70 | N/A                  | 40           | 1.37           |
| PCH 38694A<br>NSN 2425009637844R<br>PIN 242500   | J79<br>A-7E    | CAEM09 | 4             |                | 70                           | 74  | 82  | 62 | N/A                  | 10           | 3.8            |
| PCH<br>NSN<br>PIN  |                |        |               |                |                              |     |     |    |                      |              |                |
| PCH<br>NSN<br>PIN  |                |        |               |                |                              |     |     |    |                      |              |                |
| PCH<br>NSN<br>PIN  |                |        |               |                |                              |     |     |    |                      |              |                |
| PCH<br>NSN<br>PIN  |                |        |               |                |                              |     |     |    |                      |              |                |



# WORKLOAD JFILE

| NAME <u>Sendra Witten</u>   |                | ALC <u>OC</u> |               | DATE <u>5/19/89</u> | RCC <u>MATRA</u>             |     | SHEET <u>1</u> OF <u>2</u> |     |                      |                |                |
|-----------------------------|----------------|---------------|---------------|---------------------|------------------------------|-----|----------------------------|-----|----------------------|----------------|----------------|
| ITEM NUMBER                 | AIRCRAFT MODEL | WCD           | WORKLOAD TYPE | FLOATING STOCK      | ACTUAL PRODUCTION BY QUARTER |     |                            |     | NO. OF ENVELOP UNITS | MAXIMUM W.L.P. | STANDARD HOURS |
|                             |                |               |               |                     | 1                            | 2   | 3                          | 4   |                      |                |                |
| PCN<br>NSN<br>PIN<br>35023A | TF 33<br>3-7-9 | CAEY10        | 4             | Ø                   | 84                           | 62  | 50                         | 65  | <                    | 15             | 12.0           |
| PCN<br>NSN<br>PIN<br>98093A | TF 33<br>P7    | CAEC11        | 4             |                     | 152                          | 145 | 124                        | 94  | 3                    | 30             | 12.4           |
| PCN<br>NSN<br>PIN<br>38718A | J79-15         | CAEM02        | 4             |                     | 97                           | 97  | 87                         | 84  | 4                    | 15             | 9.2            |
| PCN<br>NSN<br>PIN<br>30241A | J57-43         | CAEB05        | 4             |                     | 223                          | 144 | 103                        | 50  | 2                    | 40             | 6.0            |
| PCN<br>NSN<br>PIN<br>34044A | TF33-7         | CAEC04        | 4             |                     | 54                           | 38  | 47                         | 19  | 3                    | 10             | 9.8            |
| PCN<br>NSN<br>PIN<br>49711A | TF33-3         | CAEC07        | 4             |                     | 78                           | 79  | 48                         | 23  | 2                    | 15             | 7.2            |
| PCN<br>NSN<br>PIN<br>34128A | TF33-111       | CAEY08        | 4             | 162                 | 140                          | 170 | 129                        | 129 | NA                   | 45             | 4.3            |
| PCN<br>NSN<br>PIN<br>98001A | TF33-3         | CAEC07        | 4             | 22                  | 26                           | 23  | 23                         | 23  | 2                    | 8              | 6.7            |
| PCN<br>NSN<br>PIN<br>38694A | J79-15-17      | CAEM09        | 4             | 70                  | 81                           | 47  | 90                         | 90  | NA                   | 10             | 3.8            |
| PCN<br>NSN<br>PIN<br>50217A | TF33-5         | CAEA01        | 4             | 1                   | 5                            | 2   | 5                          | 5   | 2                    | 5              | 10.0           |
| PCN<br>NSN<br>PIN<br>49315A | TF30-3-79      | CAEY09        | 4             | 301                 | 209                          | 215 | 260                        | 260 | NA                   | 50             | 4.0            |
| PCN<br>NSN<br>PIN<br>38669A | J79-15-17      | CAEC03        | 4             | 37                  | 45                           | 35  | 30                         | 30  | 1                    | 10             | 4.5            |
| PCN<br>NSN<br>PIN<br>35510A | TF30-1100      | CAEY12        | 4             | 21                  | 16                           | 26  | 2                          | 2   | NA                   | 8              | 5.2            |



**FILE**

[illegible]



DUE 27 APR, 1989

# EQUIPMENT PROFILE

| NAME <u>Duane Hughes</u> |                            | ALC <u>0000</u>    |     | DATE <u>15 MAY 89</u> |                   | RCC <u>MANIPCA</u> |                                   | SHEET <u>1</u> OF <u>1</u> |   |                |     |                          |                  |                                 |
|--------------------------|----------------------------|--------------------|-----|-----------------------|-------------------|--------------------|-----------------------------------|----------------------------|---|----------------|-----|--------------------------|------------------|---------------------------------|
| EQUIPMENT CODE           | EQUIPMENT TYPE/DESCRIPTION | QUANTITY PER SHIFT |     |                       | DOWNTIME          |                    |                                   |                            | PERCENT USED FOR OTHER RCCs (e.g. TIME NOT AVAILABLE) | ENVELOPE UNITS |     | ALTERNATE EQUIPMENT CODE | SOURCE           |                                 |
|                          |                            | 1st                | 2nd | 3rd                   | PREVENTIVE MAINT. |                    | UNSCHEDULED BREAKDOWN REPAIR TIME |                            |   | MIN            | MAX |                          |                  |                                 |
|                          |                            |                    |     |                       | FREQ              | SHIFT              | DOWN TIME                         | MTBF                       | MTTR  |                |     |                          |                  |                                 |
| OC 4286                  | 379 Temp Air               | 1                  | 0   | 0                     | 090               | 1                  | 00080                             | 365                        | 020   | 0%             | 1   | A                        |                  | TRADE INVENTORY LIST SUPERVISOR |
| OC 4285                  | 379 Temp Air               | 1                  | 0   | 0                     | 090               | 1                  | 00080                             | 365                        | 020   | 0%             | N   | A                        |                  | TRADE INVENTORY LIST SUPERVISOR |
| OC 4531                  | KIT Test Air               | 1                  | 0   | 0                     | 180               | 1                  | 00080                             | 730                        | 020   |                | N   | A                        | OC107C           | TRADE INVENTORY LIST SUPERVISOR |
| OC 3908                  | Timing Test 30"            | 1                  | 0   | 0                     | NPCR              | NA                 | NA                                | 365                        | 010 in shop   |                | N   | A                        | New Part of 107C | Shop SUPERVISOR                 |
| NA                       | Fully Bx Test              | 1                  | 0   | 0                     | 365               | NA                 | NA                                | never failed               | never failed  |                | N   | A                        |                  | TRADE INVENTORY LIST SUPERVISOR |
| NA                       | Auto Ig Test               | 1                  | 0   | 0                     | NPCR              | NA                 | NA                                | 365                        | in shop   |                | 1   | A                        |                  | Shop SUPERVISOR                 |
| OC 6585                  | 24sec Test                 | 1                  | 0   | 0                     | 365               | 1                  | 00080                             | never failed               | never failed  |                |     |                          |                  | TRADE INVENTORY LIST SUPERVISOR |
| NA                       | 24sec Test 30"             | 4                  | 0   | 0                     | 190               | 1                  | 00560                             | 1145                       | 020   | 0%             | 1   | A                        |                  | TRADE INVENTORY LIST SUPERVISOR |
|                          |                            |                    |     |                       |                   |                    |                                   |                            |   |                |     |                          |                  |                                 |
|                          |                            |                    |     |                       |                   |                    |                                   |                            |   |                |     |                          |                  |                                 |
|                          |                            |                    |     |                       |                   |                    |                                   |                            |   |                |     |                          |                  |                                 |
|                          |                            |                    |     |                       |                   |                    |                                   |                            |   |                |     |                          |                  |                                 |
|                          |                            |                    |     |                       |                   |                    |                                   |                            |   |                |     |                          |                  |                                 |
|                          |                            |                    |     |                       |                   |                    |                                   |                            |   |                |     |                          |                  |                                 |
|                          |                            |                    |     |                       |                   |                    |                                   |                            |   |                |     |                          |                  |                                 |

NER:



# EQUIPMENT PROFILE

DUE 21 APR. 1987

| NAME <u>Sandra Wisher</u> |                            | ALC <u>OC</u>      |     | DATE <u>1 1 1</u> |                   | RCC <u>MATPCA</u> |           | SHEET <u>OF</u>                   |   |                          |                          |           |
|---------------------------|----------------------------|--------------------|-----|-------------------|-------------------|-------------------|-----------|-----------------------------------|---|--------------------------|--------------------------|-----------|
| EQUIPMENT CODE            | EQUIPMENT TYPE/DESCRIPTION | QUANTITY PER SHIFT |     |                   | PREVENTIVE MAINT. |                   | DOWNTIME  |                                   | PERCENT USED FOR OTHER RCCs (i.e. TIME NOT AVAILABLE) | ENVELOP UNITS<br>MIN MAX | ALTERNATE EQUIPMENT CODE | SOURCE    |
|                           |                            | 1st                | 2nd | 3rd               | FREQ.             | SHIFT             | DOWN TIME | BREAKDOWN REPAIR TIME<br>HIDE MTR |   |                          |                          |           |
| VJ                        | ---                        |                    |     |                   |                   |                   |           |                                   |   |                          |                          |           |
| OC 3952                   | IGN TST CUB 20y            | 3                  |     |                   |                   | 1                 | 1:50      | 730                               | 0040  |                          |                          | TIME SUPV |
| CC 4929                   | JEI IGN TST 20y            |                    |     |                   |                   | 1                 | NA        | 2:10                              | 0040  |                          | OC 3953                  |           |
|                           | JEI IGN TST 20y            |                    |     |                   |                   | 1                 | 0050      | 020                               | 0045.0  |                          | CC 3906                  |           |
|                           | IGN TSTR 20y               | 2                  |     |                   |                   | 1                 | 0050      | 730                               | 0041  |                          |                          |           |
| OC 0303                   | ELEC CUBEN 20y             | 1                  |     |                   |                   | 1                 | 1         | 245                               |   |                          |                          |           |
| CC 4060                   | IGN CUB TST 20y            | 1                  |     |                   |                   | 1                 | 1         | 180                               | 0040  |                          |                          |           |
| CC 2429                   | CUBEN 20y                  | 1                  |     |                   |                   | 1                 | 1         | 345                               | 0040  |                          | OC 3958<br>OC 3959       |           |
|                           | VULTRIF 1y                 | 2                  |     |                   |                   | 1                 | 1         | 34                                | 0040  |                          |                          |           |
| PH                        | PK CAP TST 20y             | 1                  |     |                   |                   | 1                 | 1         | 180                               | 0040  |                          |                          |           |
| 01 2429                   | LEAK DET 20y               | 1                  |     |                   |                   | 1                 | 1         | 730                               |   |                          |                          |           |
|                           | ---                        |                    |     |                   |                   |                   |           |                                   |   |                          |                          |           |
|                           | ---                        |                    |     |                   |                   |                   |           |                                   |   |                          |                          |           |

NER



Due Tues. APR 25, 1989

# MANPOWER PROFILE

| NAME <u>Huggins Duane</u> ALC <u>0660</u> CITY <u>DATE 19 Apr 89</u> RCC <u>2014</u> PC <u>1</u> SHEET <u>1</u> OF <u>1</u> |  |         |                    |   |   |   |         |   |   |   |                            |   |   |     |           |   |   |     |                            |         |   |   |   |          |  |  |  |  |
|---|--|---------|--------------------|---|---|---|---------|---|---|---|----------------------------|---|---|-----|-----------|---|---|-----|----------------------------|---------|---|---|---|----------|--|--|--|--|
| SKILL CODE/LEVEL  | JOB DESCRIPTION  | QUARTER | QUANTITY AVAILABLE |   |   |   |         |   |   |   | MANPOWER AVAILABLE (HOURS) |   |   |     |           |   |   |     | ALTERNATE SKILL CODE/LEVEL |         |   |   |   |          |  |  |  |  |
|   |  |         | WORK WEEK          |   |   |   | WEEKEND |   |   |   | HOLIDAYS                   |   |   |     | WORK WEEK |   |   |     |                            | WEEKEND |   |   |   | HOLIDAYS |  |  |  |  |
|   |  |         | 1                  | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1                          | 2 | 3 | 4   | 1         | 2 | 3 | 4   |                            | 1       | 2 | 3 | 4 |          |  |  |  |  |
| AY 09   | Engine Electrical Component Repair/overhaul<br>Misc Aircraft Electrical Components Repair/overhaul | 1       | 7                  |   |   |   | 7       |   |   |   |                            |   |   | 6.0 |           |   |   | 6.0 |                            |         |   |   |   |          |  |  |  |  |
|   |  | 2       | 7                  |   |   |   | 7       |   |   |   |                            |   |   | 5.9 |           |   |   | 5.9 |                            |         |   |   |   |          |  |  |  |  |
|   |  | 3       | 6                  |   |   |   | 6       |   |   |   |                            |   |   | 5.9 |           |   |   | 5.9 |                            |         |   |   |   |          |  |  |  |  |
|   |  | 4       | 6                  |   |   |   | 6       |   |   |   |                            |   |   | 5.9 |           |   |   | 5.9 |                            |         |   |   |   |          |  |  |  |  |
| AY 10   | Engine Electrical Component Repair/overhaul, Misc Aircraft Electrical Component Repair/overhaul    | 1       | 9                  |   |   |   | 9       |   |   |   |                            |   |   | 5.9 |           |   |   | 5.9 |                            |         |   |   |   |          |  |  |  |  |
|   |  | 2       | 7                  |   |   |   | 7       |   |   |   |                            |   |   | 5.9 |           |   |   | 5.9 |                            |         |   |   |   |          |  |  |  |  |
|   |  | 3       | 5                  |   |   |   | 5       |   |   |   |                            |   |   | 5.9 |           |   |   | 5.9 |                            |         |   |   |   |          |  |  |  |  |
|   |  | 4       | 5                  |   |   |   | 5       |   |   |   |                            |   |   | 5.9 |           |   |   | 5.9 |                            |         |   |   |   |          |  |  |  |  |
|   |  | 1       |                    |   |   |   |         |   |   |   |                            |   |   |     |           |   |   |     |                            |         |   |   |   |          |  |  |  |  |
|   |  | 2       |                    |   |   |   |         |   |   |   |                            |   |   |     |           |   |   |     |                            |         |   |   |   |          |  |  |  |  |
|   |  | 3       |                    |   |   |   |         |   |   |   |                            |   |   |     |           |   |   |     |                            |         |   |   |   |          |  |  |  |  |
|   |  | 4       |                    |   |   |   |         |   |   |   |                            |   |   |     |           |   |   |     |                            |         |   |   |   |          |  |  |  |  |
|   |  | 1       |                    |   |   |   |         |   |   |   |                            |   |   |     |           |   |   |     |                            |         |   |   |   |          |  |  |  |  |
|   |  | 2       |                    |   |   |   |         |   |   |   |                            |   |   |     |           |   |   |     |                            |         |   |   |   |          |  |  |  |  |
|   |  | 3       |                    |   |   |   |         |   |   |   |                            |   |   |     |           |   |   |     |                            |         |   |   |   |          |  |  |  |  |
|   |  | 4       |                    |   |   |   |         |   |   |   |                            |   |   |     |           |   |   |     |                            |         |   |   |   |          |  |  |  |  |

Note:  
only one  
shift at  
present time



## MANPOWER PROFILE

150-20001



ENVE JP

(For Internal Use, Not a Model Input) (Batch Process Only)

ALC OC RCC MATPCA EQUIPMENT CODE OC 2760 (OC 2758, 2759 - All models)  
 TOTAL VOLUME OF EQUIPMENT IN CU. FT. 10

| LIST OF PARTS BY ITEM NUMBER                      | SIZE VOLUME CU. FT. | UNIT VALUE | MINIMUM | MAXIMUM | REMARKS/SOURCE                                |
|---|---------------------|------------|---------|---------|---|
| PCN 35613<br>NSN 2925009413788A0<br>PM 43137      | .1 cu. FT.          | 2          | 1       | 6       | EACH CODED IS LIMITED TO 6000 DUE TO FINISHES |
| PCN 38649<br>NSN 2925009921235PL<br>PM 10-3539752 | .09 cu. FT.         | 1          | 1       | 6       |   |
| PCN 98693<br>NSN 2925004567687AU<br>PM 43211      | .2 cu. FT.          | 3          | 1       | 6       |   |
| PCN 38718<br>NSN 2925011325821PL<br>PM 10-3906351 | .3 cu. FT.          | 4          | 1       | 6       |   |
| PCN 30941<br>NSN 292500081818KU<br>PM 10-1067001  | .14 cu. FT.         | 2          | 1       | 6       |   |
| PCN 34041<br>NSN 2925009862155KV<br>PM 42590      | .2 cu. FT.          | 3          | 1       | 6       |   |
| PCN 49711<br>NSN 2925011316761KU<br>PM 10-6178601 | .1 cu. FT.          | 2          | 1       | 6       |   |
| PCN 98601<br>NSN 292500773731101<br>PM 10-1978601 | .1 cu. FT.          | 2          | 1       | 6       |   |
| PCN 50317<br>NSN 2925011615516KU<br>PM 44387      | .14 cu. FT.         | 2          | 1       | 6       |   |
| PCN<br>NSN<br>PM                                  |                     |            |         |         |   |
| PCN<br>NSN<br>PM                                  |                     |            |         |         |   |
| PCN<br>NSN<br>PM                                  |                     |            |         |         |   |



# ENVE P

(For Internal Use, Not a Model Input) (Batch Process Only)

| ALC  |                     | RCC        |         | EQUIPMENT CODE |   | TOTAL VOLUME OF EQUIPMENT IN CU. FT. |  | REMARKS/SOURCE |  |
|--|---------------------|------------|---------|----------------|---|--------------------------------------|--|----------------|--|
| OC   |                     | MATPAA     |         | OC 0303        |   | 3.1/2                                |  | (1.4)          |  |
| LIST OF PARTS BY ITEM NUMBER                           | SIZE/VOLUME CU. FT. | UNIT VALUE | MINIMUM | MAXIMUM        |   |                                      |  |                |  |
| PCN 98093<br>NSN 2539 00 456 763 120<br>PM 4337        | .2 cu. FT           | 3          | 1       | 18             | This burn does not have fittings inside |                                      |  |                |  |
| PCN 34044<br>NSN 2925 00 946 2055 120<br>PM 42390      | .2 cu. FT           | 3          | 1       | 18             |   |                                      |  |                |  |
| PCN 49711<br>NSN 2935 01 131 876 120<br>PM 10-6178601  | .1 cu. FT           | 2          | 1       | 18             |   |                                      |  |                |  |
| PCN 78001<br>NSN 5105 00 773 7217 120<br>PM 10-1878601 | .1 cu. FT           | 2          | 1       | 18             |   |                                      |  |                |  |
| PCN<br>NSN<br>PM                                       |                     |            |         |                |   |                                      |  |                |  |
| PCN<br>NSN<br>PM                                       |                     |            |         |                |   |                                      |  |                |  |
| PCN<br>NSN<br>PM                                       |                     |            |         |                |   |                                      |  |                |  |
| PCN<br>NSN<br>PM                                       |                     |            |         |                |   |                                      |  |                |  |
| PCN<br>NSN<br>PM                                       |                     |            |         |                |   |                                      |  |                |  |
| PCN<br>NSN<br>PM                                       |                     |            |         |                |   |                                      |  |                |  |
| PCN<br>NSN<br>PM                                       |                     |            |         |                |   |                                      |  |                |  |
| PCN<br>NSN<br>PM                                       |                     |            |         |                |   |                                      |  |                |  |
| PCN<br>NSN<br>PM                                       |                     |            |         |                |   |                                      |  |                |  |
| PCN<br>NSN<br>PM                                       |                     |            |         |                |   |                                      |  |                |  |
| PCN<br>NSN<br>PM                                       |                     |            |         |                |   |                                      |  |                |  |
| PCN<br>NSN<br>PM                                       |                     |            |         |                |   |                                      |  |                |  |
| PCN<br>NSN<br>PM                                       |                     |            |         |                |   |                                      |  |                |  |
| PCN<br>NSN<br>PM                                       |                     |            |         |                |   |                                      |  |                |  |



## ENVELC

note: no batch  
processes ran on  
any of this eq'p.  
1sting.



# OPERATION PROFILE

| NAME <u>Parker</u> |         | ALC <u>OC</u>         |                             | DATE <u>05/09/89</u>   |                        | RCC <u>MAT PCA</u> |      | SHEET <u>1</u>  |      |      |                      |                 |      |
|--------------------|---------|-----------------------|-----------------------------|------------------------|------------------------|--------------------|------|-----------------|------|------|----------------------|-----------------|------|
| PCN <u>30056A</u>  |         | WCD <u>CAE303</u>     |                             | WCD DATE <u>882003</u> |                        |                    |      |                 |      |      |                      |                 |      |
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE         | MANPOWER               |                    |      | EQUIPMENT       |      |      | DATA SOURCE COMMENTS |                 |      |
|                    |         |                       |                             |                        | MANDATORY FLOW HOURS % | SKILL CODE/LEVEL   | QTY. | TIME REQUIRED % | HRS. | QTY. |                      | TIME REQUIRED % | HRS. |
| 00                 | MAT PCA | IN DATE               | 1.0                         | TRANSIT                |                        |                    |      |                 |      |      |                      |                 |      |
|                    |         |                       |                             | SETUP                  |                        |                    |      |                 |      |      |                      |                 |      |
|                    |         |                       |                             | PROCESS                |                        |                    |      |                 |      |      |                      |                 |      |
|                    |         |                       |                             | TRANSIT                |                        |                    |      |                 |      |      |                      |                 |      |
|                    |         |                       |                             | SETUP                  |                        |                    |      |                 |      |      |                      |                 |      |
|                    |         |                       |                             | PROCESS                |                        |                    |      |                 |      |      |                      |                 |      |
|                    |         |                       |                             | TRANSIT                |                        |                    |      |                 |      |      |                      |                 |      |
|                    |         |                       |                             | SETUP                  |                        |                    |      |                 |      |      |                      |                 |      |
|                    |         |                       |                             | PROCESS                |                        |                    |      |                 |      |      |                      |                 |      |
|                    |         |                       |                             | TRANSIT                |                        |                    |      |                 |      |      |                      |                 |      |
|                    |         |                       |                             | SETUP                  |                        |                    |      |                 |      |      |                      |                 |      |
|                    |         |                       |                             | PROCESS                |                        |                    |      |                 |      |      |                      |                 |      |
|                    |         |                       |                             | TRANSIT                |                        |                    |      |                 |      |      |                      |                 |      |
|                    |         |                       |                             | SETUP                  |                        |                    |      |                 |      |      |                      |                 |      |
|                    |         |                       |                             | PROCESS                |                        |                    |      |                 |      |      |                      |                 |      |
|                    |         |                       |                             | TRANSIT                |                        |                    |      |                 |      |      |                      |                 |      |
|                    |         |                       |                             | SETUP                  |                        |                    |      |                 |      |      |                      |                 |      |
|                    |         |                       |                             | PROCESS                |                        |                    |      |                 |      |      |                      |                 |      |

\* Note - This sheet for in dates



# OPERATION: .OFILE

Handwritten notes and signatures at the top of the page.

NAME Parker, Phil ALC 00 DATE 05/04/89 RCC MIAT-PCA SHEET 1 OF 6

WCD CAEZ 03 WCD DATE 882003

| OPERATION NUMBER | RCC | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |      | SKILL CODE/ LEVEL | MANPOWER |   | TIME REQUIRED |   | EQUIPMENT CODE | QTY. | TIME REQUIRED |   | DATA SOURCE COMMENTS |
|------------------|-----|-----------------------|-----------------------------|----------------|----------------------|------|-------------------|----------|---|---------------|---|----------------|------|---------------|---|----------------------|
|                  |     |                       |                             |                | %                    | HRS. |                   | QTY.     | % | HRS.          | % |                |      | HRS.          | % |                      |
| 010              | PCA | REC                   | 1.0                         | TRANSIT        |                      |      |                   |          |   |               |   |                |      |               |   |                      |
|                  |     |                       |                             | SETUP          |                      |      |                   |          |   |               |   |                |      |               |   |                      |
|                  |     |                       |                             | PROCESS        |                      |      |                   |          |   |               |   |                |      |               |   |                      |
| 020              |     | INFO                  | 1.0                         | TRANSIT        |                      |      |                   |          |   |               |   |                |      |               |   |                      |
|                  |     |                       |                             | SETUP          |                      |      |                   |          |   |               |   |                |      |               |   |                      |
|                  |     |                       |                             | PROCESS        |                      |      |                   |          |   |               |   |                |      |               |   |                      |
| 025              |     | TEST                  | 1.0                         | TRANSIT        |                      |      |                   |          |   |               |   |                |      |               |   |                      |
|                  |     |                       |                             | SETUP          |                      |      |                   |          |   |               |   |                |      |               |   |                      |
|                  |     |                       |                             | PROCESS        |                      |      |                   |          |   |               |   |                |      |               |   |                      |
| 030              |     | DIS                   | 1.0                         | TRANSIT        |                      |      |                   |          |   |               |   |                |      |               |   |                      |
|                  |     |                       |                             | SETUP          |                      |      |                   |          |   |               |   |                |      |               |   |                      |
|                  |     |                       |                             | PROCESS        |                      |      |                   |          |   |               |   |                |      |               |   |                      |
| 040              |     | CIN                   | 1.0                         | TRANSIT        |                      |      |                   |          |   |               |   |                |      |               |   |                      |
|                  |     |                       |                             | SETUP          |                      |      |                   |          |   |               |   |                |      |               |   |                      |
|                  |     |                       |                             | PROCESS        |                      |      |                   |          |   |               |   |                |      |               |   |                      |

Handwritten notes: Skill 5-13, Applicable To.

Handwritten notes: Note: This opn not listed in WCD. Initial function TEST. See Opns 160-22 Equip - DI = direct indirect SA = Switch Adjust Skill Code - 9-11

Handwritten note: Skill Code 1.0



# OPERATION FILE

| NAME <u>Reker, Philip</u> ALC <u>CC</u> DATE <u>05/04/89</u> RCC <u>MAT PCA</u> SHEET <u>2</u> OF <u>6</u> |         | WCD <u>CAF203</u> WCD DATE <u>08/30/83</u> |                             |                |                                |                              |      |                         |                             |      |                         |                                     |
|--|---------|--|-----------------------------|----------------|--------------------------------|------------------------------|------|-------------------------|-----------------------------|------|-------------------------|-------------------------------------|
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION                      | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS<br>% HRS. | MANPOWER<br>SKILL CODE/LEVEL | QTY. | TIME REQUIRED<br>% HRS. | EQUIPMENT<br>EQUIPMENT CODE | QTY. | TIME REQUIRED<br>% HRS. | DATA SOURCE COMMENTS                |
| 050  | MAT PCA | INSP                                       | 1.0                         | TRANSIT        | -                              |                              |      |                         |                             |      |                         | Note: This is a visual inspection.  |
|  |         |  |                             | SETUP          | -                              |                              |      |                         |                             |      |                         |                                     |
|  |         |  |                             | PROCESS        | -                              |                              | 1    | 1.0                     | BEN4                        | 1    | 1.0                     | 17                                  |
| 060  |         | INSP                                       | 1.0                         | TRANSIT        | -                              |                              |      |                         |                             |      |                         | skill range 9-12<br>Micrometer req. |
|  |         |  |                             | SETUP          | -                              |                              |      |                         |                             |      |                         |                                     |
|  |         |  |                             | PROCESS        | -                              |                              | 1    | 1.0                     | BEN4                        | 1    | 1.0                     | 17                                  |
| 070  |         | INSP                                       | 1.0                         | TRANSIT        | -                              |                              |      |                         |                             |      |                         | skill range 9-12<br>Micrometer req. |
|  |         |  |                             | SETUP          | -                              |                              |      |                         |                             |      |                         |                                     |
|  |         |  |                             | PROCESS        | -                              |                              | 1    | 1.0                     | BEN4                        | 1    | 1.0                     | 17                                  |
| 080  |         | INSP                                       | 1.0                         | TRANSIT        | -                              |                              |      |                         |                             |      |                         | skill range 9-12<br>Micrometer req. |
|  |         |  |                             | SETUP          | -                              |                              |      |                         |                             |      |                         |                                     |
|  |         |  |                             | PROCESS        | -                              |                              | 1    | 1.0                     | BEN4                        | 1    | 1.0                     | 17                                  |
| 090  |         | INSP                                       | 1.0                         | TRANSIT        | -                              |                              |      |                         |                             |      |                         | skill range 9-12<br>Micrometer req. |
|  |         |  |                             | SETUP          | -                              |                              |      |                         |                             |      |                         |                                     |
|  |         |  |                             | PROCESS        | -                              |                              | 1    | 1.0                     | BEN4                        | 1    | 1.0                     | 17                                  |



# OPERATION: OFILE

| NAME <u>Parker, Phillip</u> ALC <u>OC</u> DATE <u>05/04/89</u> RCC <u>MAT PCA</u> SHEET <u>3</u> OF <u>6</u> |         | WCD <u>CAE303</u> WCD DATE <u>682003</u> |                             |                             |                                |                              |             |                         |                        |                         |                                      |
|--|---------|--|-----------------------------|-----------------------------|--------------------------------|------------------------------|-------------|-------------------------|------------------------|-------------------------|--------------------------------------|
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION                    | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE              | MANDATORY FLOW HOURS<br>% HRS. | MANPOWER<br>SKILL CODE/LEVEL | QTY.        | TIME REQUIRED<br>% HRS. | EQUIPMENT<br>CODE QTY. | TIME REQUIRED<br>% HRS. | DATA SOURCE COMMENTS                 |
| 100  | MAT PCA | INSP                                     | 1.0                         | TRANSIT<br>SETUP<br>PROCESS | -<br>-<br>-                    | -<br>-<br>BY10               | 1<br>1<br>1 | -<br>-<br>1.0 .17       | -<br>-<br>BEN4 1       | -<br>-<br>1.0 .17       | micrometer req.                      |
| 110  |         | INSP                                     | 1.0                         | TRANSIT<br>SETUP<br>PROCESS | -<br>-<br>-                    | -<br>-<br>-                  | 1<br>1<br>1 | -<br>-<br>1.0 .17       | -<br>-<br>BEN4 1       | -<br>-<br>1.0 .17       | SKILL 9-10<br>micrometer req.        |
| 120  |         | PROC                                     | 1.0                         | TRANSIT<br>SETUP<br>PROCESS | -<br>-<br>-                    | -<br>-<br>-                  | -<br>-<br>1 | -<br>-<br>1.0 .08       | -<br>-<br>BEN4 1       | -<br>-<br>1.0 .17       | AS Required<br>SKILL 9-10            |
| 130  |         | ASSY                                     | 1.0                         | TRANSIT<br>SETUP<br>PROCESS | -<br>-<br>-                    | -<br>-<br>-                  | 1<br>1<br>1 | -<br>-<br>1.0 .152      | -<br>-<br>BEN4 1       | -<br>-<br>1.0 .17       | SKILL 9-10<br>several steps required |
| 140  |         | ASSY                                     | 1.0                         | TRANSIT<br>SETUP<br>PROCESS | -<br>-<br>-                    | -<br>-<br>-                  | 1<br>1<br>1 | -<br>-<br>1.0 .1        | -<br>-<br>BEN4 1       | -<br>-<br>1.0 .1        | Adjustment required<br>SKILL 9-10    |



| NAME <u>Baker, Philip</u> |         | ALC                   |                             | DATE <u>08-18-79</u> |                      | RCC                    |          | <u>MAT PCA</u> |           | SHEET <u>4</u> OF <u>6</u> |                         |                      |      |      |  |   |   |   |   |   |
|---------------------------|---------|-----------------------|-----------------------------|----------------------|----------------------|------------------------|----------|----------------|-----------|----------------------------|-------------------------|----------------------|------|------|--|---|---|---|---|---|
| PCN<br>ASH<br>PRI         |         | <u>30DS6A</u>         |                             | WCD <u>CAE203</u>    |                      | WCD DATE <u>882003</u> |          |                |           |                            |                         |                      |      |      |  |   |   |   |   |   |
| OPERATION NUMBER          | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE       | MANDATORY FLOW HOURS |                        | MANPOWER |                | EQUIPMENT |                            | TIME REQUIRED %<br>HRS. | DATA SOURCE COMMENTS |      |      |  |   |   |   |   |   |
|                           |         |                       |                             |                      | %                    | HRS.                   | QTY.     | %              | HRS.      | EQUIPMENT CODE             |                         |                      | QTY. |      |  |   |   |   |   |   |
| 150                       | MAT PCA | ASSY                  | 1.0                         | TRANSIT              | -                    | -                      | 1        | BY10           | 1.0       | .18                        | BEN4                    | 1                    | 1.0  | .18  | Adjustment required.<br>SKILL 9-10                           |   |   |   |   |   |
|                           |         |                       |                             | SETUP                | -                    | -                      |          |                |           |                            |                         |                      |      |      |  | - | - | - | - | - |
|                           |         |                       |                             | PROCESS              | -                    | -                      |          |                |           |                            |                         |                      |      |      |  | - | - | - | - | - |
| 155                       |         | ASSY                  | 1.0                         | TRANSIT              | -                    | -                      | 1        |                | 1.0       | .17                        | BEN4                    | 1                    | 1.0  | .17  | Adjustment required.<br>SKILL 9-10                           |   |   |   |   |   |
|                           |         |                       |                             | SETUP                | -                    | -                      |          |                |           |                            |                         |                      |      |      |  | - | - | - | - | - |
|                           |         |                       |                             | PROCESS              | -                    | -                      |          |                |           |                            |                         |                      |      |      |  | - | - | - | - | - |
| 158                       |         | ASSY                  | 1.0                         | TRANSIT              | -                    | -                      | 1        |                | 1.0       | .02                        | BEN4                    | 1                    | 1.0  | .02  | Requirements<br>SKILL 9-10                                   |   |   |   |   |   |
|                           |         |                       |                             | SETUP                | -                    | -                      |          |                |           |                            |                         |                      |      |      |  | - | - | - | - | - |
|                           |         |                       |                             | PROCESS              | -                    | -                      |          |                |           |                            |                         |                      |      |      |  | - | - | - | - | - |
| 160                       |         | TEST                  | 1.0                         | TRANSIT              | -                    | -                      | 1        |                | 1.0       | .08                        | -                       | -                    | -    | -    | Test Apparatus:<br>SW, Adjustment Device (SAD)<br>SKILL 9-10 |   |   |   |   |   |
|                           |         |                       |                             | SETUP                | -                    | -                      |          |                |           |                            |                         |                      |      |      |  | - | - | - | - | - |
|                           |         |                       |                             | PROCESS              | -                    | -                      |          |                |           |                            |                         |                      |      |      |  | - | - | - | - | - |
| 170                       |         | TEST                  | 1.0                         | TRANSIT              | -                    | -                      | 1        |                | 1.0       | 1.01                       | BEN4                    | 1                    | 1.0  | 1.01 | Separate test from above.<br>SKILL 9-10                      |   |   |   |   |   |
|                           |         |                       |                             | SETUP                | -                    | -                      |          |                |           |                            |                         |                      |      |      |  | - | - | - | - | - |
|                           |         |                       |                             | PROCESS              | -                    | -                      |          |                |           |                            |                         |                      |      |      |  | - | - | - | - | - |

|                  |  |                  |  |
|------------------|--|------------------|--|
| WCD CAE203       |  | WCD DATE 862003  |  |
| WCD 30D56A       |  | WCD 30D56A       |  |
| PRI 30D56A       |  | PRI 30D56A       |  |
| NSN 30D56A       |  | NSN 30D56A       |  |
| OPERATION NUMBER |  | OPERATION NUMBER |  |
| 150              |  | 150              |  |
| MAT PCA          |  | MAT PCA          |  |
| ASSY             |  | ASSY             |  |
| 1.0              |  | 1.0              |  |
| TRANSIT          |  | TRANSIT          |  |
| SETUP            |  | SETUP            |  |
| PROCESS          |  | PROCESS          |  |
| 155              |  | 155              |  |
| ASSY             |  | ASSY             |  |
| 1.0              |  | 1.0              |  |
| TRANSIT          |  | TRANSIT          |  |
| SETUP            |  | SETUP            |  |
| PROCESS          |  | PROCESS          |  |
| 158              |  | 158              |  |
| ASSY             |  | ASSY             |  |
| 1.0              |  | 1.0              |  |
| TRANSIT          |  | TRANSIT          |  |
| SETUP            |  | SETUP            |  |
| PROCESS          |  | PROCESS          |  |
| 160              |  | 160              |  |
| TEST             |  | TEST             |  |
| 1.0              |  | 1.0              |  |
| TRANSIT          |  | TRANSIT          |  |
| SETUP            |  | SETUP            |  |
| PROCESS          |  | PROCESS          |  |
| 170              |  | 170              |  |
| TEST             |  | TEST             |  |
| 1.0              |  | 1.0              |  |
| TRANSIT          |  | TRANSIT          |  |
| SETUP            |  | SETUP            |  |
| PROCESS          |  | PROCESS          |  |



# OPERATION FILE

| NAME <u>Philler, Philip</u> ALC <u>OC</u> DATE <u>05-04-89</u> RCC <u>PIAT PCA</u> SHEET <u>5</u> OF <u>6</u> |          |                       |                             |                |                                |                  |      |                         |                |      |                         |  |
|---|----------|-----------------------|-----------------------------|----------------|--------------------------------|------------------|------|-------------------------|----------------|------|-------------------------|--|
| PCN <u>30056A</u> WCD <u>CAE 303</u> WCD DATE <u>882003</u>   |          |                       |                             |                |                                |                  |      |                         |                |      |                         |  |
| OPERATION NUMBER  | RCC      | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS<br>% HRS. | SKILL CODE/LEVEL | QTY. | TIME REQUIRED<br>% HRS. | EQUIPMENT CODE | QTY. | TIME REQUIRED<br>% HRS. | DATA SOURCE COMMENTS                       |
| 220   | PIAT PCA | TEST                  | 1.0                         | TRANSIT        | -                              | -                | -    | -                       | -              | -    | -                       | Test Apperatus<br>Dist Ind. Refo<br>(DT)   |
|   |          |                       |                             | SETUP          | -                              | -                | -    | -                       | -              | -    | -                       |  |
|   |          |                       |                             | PROCESS        | -                              | -                | 1    | 1.0, 53                 | BEN 4          | 1    | 1.0, 53                 | SP-11 9-10                                 |
| 230   |          | PROC                  | 1.0                         | TRANSIT        | -                              | -                | -    | -                       | -              | -    | -                       | Special tool<br>required.                  |
|   |          |                       |                             | SETUP          | -                              | -                | -    | -                       | -              | -    | -                       |  |
|   |          |                       |                             | PROCESS        | -                              | -                | 1    | 1.0, 03                 | BEN 4          | 1    | 1.0, 03                 | SP-11 9-10                                 |
| 260   |          | PW                    | 1.0                         | TRANSIT        | -                              | -                | -    | -                       | -              | -    | -                       |  |
|   |          |                       |                             | SETUP          | -                              | -                | -    | -                       | -              | -    | -                       |  |
|   |          |                       |                             | PROCESS        | -                              | -                | 1    | 1.0, 17                 | -              | -    | -                       | SK-11 9-10                                 |
| 270   |          | Insp                  | 1.0                         | TRANSIT        | -                              | -                | -    | -                       | -              | -    | -                       | Inspected for<br>presence of<br>roughness. |
|   |          |                       |                             | SETUP          | -                              | -                | -    | -                       | -              | -    | -                       |  |
|   |          |                       |                             | PROCESS        | -                              | -                | 1    | 1.0, 02                 | BEN 4          | 1    | 1.0, 02                 | SK-11 9-10                                 |
| 280   |          | PW                    | 1.0                         | TRANSIT        | -                              | -                | -    | -                       | -              | -    | -                       |  |
|   |          |                       |                             | SETUP          | -                              | -                | -    | -                       | -              | -    | -                       |  |
|   |          |                       |                             | PROCESS        | -                              | -                | 1    | 1.0, 02                 | -              | -    | -                       |  |



# OPERATION PROFILE

[illegible]



## FLOW PROCESS CHART

SUBJECT \_\_\_\_\_

DATE 05/04/89

ITEM CODE

WCD CAEZ303 WCD DATE 88203

PCH

NNH

PIN

30056A

CHART BEGINS OPN# 010CHART ENDS CAN#PREPARED BY RIP

| OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS | DESCRIPTION | OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS | DESCRIPTION |
|------------------------|----------------|---------|-------------|------------------------|----------------|---------|-------------|
| 010                    | 010            | ○DD□▽   | REC.        |                        |                | ○DD□▽   |             |
| 020                    | 020            | ○DD□▽   | INFO        |                        |                | ○DD□▽   |             |
| 025                    |                | ○DD□▽   | TEST        |                        |                | ○DD□▽   |             |
| 030                    | 030            | ○DD□▽   | DIS         |                        |                | ○DD□▽   |             |
| 040                    | 040            | ○DD□▽   | CIN         |                        |                | ○DD□▽   |             |
| 050                    | 050            | ○DD□▽   | INSP        |                        |                | ○DD□▽   |             |
| 060                    | 060            | ○DD□▽   | INSP        |                        |                | ○DD□▽   |             |
| 070                    | 070            | ○DD□▽   | INSP        |                        |                | ○DD□▽   |             |
| 080                    | 080            | ○DD□▽   | INSP        |                        |                | ○DD□▽   |             |
| 090                    | 090            | ○DD□▽   | INSP        |                        |                | ○DD□▽   |             |
| 100                    | 100            | ○DD□▽   | INSP        |                        |                | ○DD□▽   |             |
| 110                    | 110            | ○DD□▽   | INSP        |                        |                | ○DD□▽   |             |
| 120                    | 120            | ○DD□▽   | LUB         |                        |                | ○DD□▽   |             |
| 130                    | 130            | ○DD□▽   | ASSY        |                        |                | ○DD□▽   |             |
| 140                    | 140            | ○DD□▽   | ASSY        |                        |                | ○DD□▽   |             |
| 150                    | 150            | ○DD□▽   | ASSY        |                        |                | ○DD□▽   |             |
| 155                    | 155            | ○DD□▽   | ASSY        |                        |                | ○DD□▽   |             |
| 158                    | 158            | ○DD□▽   | ASSY        |                        |                | ○DD□▽   |             |
| 160                    | 160            | ○DD□▽   | TEST        |                        |                | ○DD□▽   |             |
| 170                    | 170            | ○DD□▽   | TEST        |                        |                | ○DD□▽   |             |
| 220                    | 220            | ○DD□▽   | TEST        |                        |                | ○DD□▽   |             |
| 230                    | 230            | ○DD□▽   | ACT         |                        |                | ○DD□▽   |             |
| 260                    | 260            | ○DD□▽   | PW          |                        |                | ○DD□▽   |             |
| 270                    | 220            | ○DD□▽   | INSP        |                        |                | ○DD□▽   |             |
| 280                    | 280            | ○DD□▽   | PW          |                        |                | ○DD□▽   |             |
| 290                    | 290            | ○DD□▽   | PW          |                        |                | ○DD□▽   |             |
| 295                    | 295            | ○DD□▽   | PW          |                        |                | ○DD□▽   |             |
|                        |                | ○DD□▽   |             |                        |                | ○DD□▽   |             |
|                        |                | ○DD□▽   |             |                        |                | ○DD□▽   |             |
|                        |                | ○DD□▽   |             |                        |                | ○DD□▽   |             |
|                        |                | ○DD□▽   |             |                        |                | ○DD□▽   |             |
|                        |                | ○DD□▽   |             |                        |                | ○DD□▽   |             |

○ OPERATION

◇ TRANSPORTATION

▽ STORAGE

D DELAY

□ INSPECTION

LSC-20147



# OPERATION OFILE

| NAME <u>Acker</u> |         | ALC <u>OC</u>         |                             | DATE <u>5/8/89</u>    |                      | RCC <u>MATPCA</u> |          | SHEET <u>1</u> OF <u>1</u> |           |      |                    |                      |
|-------------------|---------|-----------------------|-----------------------------|-----------------------|----------------------|-------------------|----------|----------------------------|-----------|------|--------------------|----------------------|
| PCN <u>30241A</u> |         | WCD <u>CAEBDS</u>     |                             | WCD DATE <u>89033</u> |                      |                   |          |                            |           |      |                    |                      |
| OPERATION NUMBER  | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW HOURS |                   | MANPOWER |                            | EQUIPMENT |      | TIME REQUIRED HRS. | DATA SOURCE COMMENTS |
|                   |         |                       |                             |                       | %                    | HRS.              | QTY.     | %                          | HRS.      | QTY. |                    |                      |
| 00                | MAT PCA | IN DATE               | 1.0                         | TRANSIT               |                      |                   |          |                            |           |      |                    |                      |
|                   |         |                       |                             | SETUP                 |                      |                   |          |                            |           |      |                    |                      |
|                   |         |                       |                             | PROCESS               | 1.0                  | 44.0              |          |                            |           |      |                    |                      |
|                   |         |                       |                             | TRANSIT               |                      |                   |          |                            |           |      |                    |                      |
|                   |         |                       |                             | SETUP                 |                      |                   |          |                            |           |      |                    |                      |
|                   |         |                       |                             | PROCESS               |                      |                   |          |                            |           |      |                    |                      |
|                   |         |                       |                             | TRANSIT               |                      |                   |          |                            |           |      |                    |                      |
|                   |         |                       |                             | SETUP                 |                      |                   |          |                            |           |      |                    |                      |
|                   |         |                       |                             | PROCESS               |                      |                   |          |                            |           |      |                    |                      |
|                   |         |                       |                             | TRANSIT               |                      |                   |          |                            |           |      |                    |                      |
|                   |         |                       |                             | SETUP                 |                      |                   |          |                            |           |      |                    |                      |
|                   |         |                       |                             | PROCESS               |                      |                   |          |                            |           |      |                    |                      |
|                   |         |                       |                             | TRANSIT               |                      |                   |          |                            |           |      |                    |                      |
|                   |         |                       |                             | SETUP                 |                      |                   |          |                            |           |      |                    |                      |
|                   |         |                       |                             | PROCESS               |                      |                   |          |                            |           |      |                    |                      |
|                   |         |                       |                             | TRANSIT               |                      |                   |          |                            |           |      |                    |                      |
|                   |         |                       |                             | SETUP                 |                      |                   |          |                            |           |      |                    |                      |
|                   |         |                       |                             | PROCESS               |                      |                   |          |                            |           |      |                    |                      |

Note: This sheet for IN - OUT DATES







# OPERATION FILE

| NAME <u>Archer</u> |         | ALC <u>DC</u>         |                             | DATE <u>05/08/89</u>   |                      | RCC <u>MATPCA</u> |           | SHEET <u>2</u> OF <u>5</u> |           |      |               |                      |   |      |
|--------------------|---------|-----------------------|-----------------------------|------------------------|----------------------|-------------------|-----------|----------------------------|-----------|------|---------------|----------------------|---|------|
| WCD <u>CAEBOS</u>  |         | WCD <u>CAEBOS</u>     |                             | WCD DATE <u>890901</u> |                      |                   |           |                            |           |      |               |                      |   |      |
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE         | MANDATORY FLOW HOURS |                   | MAN/POWER |                            | EQUIPMENT |      | TIME REQUIRED | DATA SOURCE COMMENTS |   |      |
|                    |         |                       |                             |                        | %                    | HRS.              | QTY.      | %                          | HRS.      | QTY. |               |                      | % | HRS. |
| 040                | MAT PCA | DIS                   | .95                         | TRANSFER               |                      |                   |           |                            |           |      |               |                      |   |      |
|                    |         |                       |                             | PROCESS                | -                    |                   |           |                            |           |      |               |                      |   |      |
|                    |         |                       |                             | PROCESS                | -                    |                   |           |                            |           |      |               |                      |   |      |
| 045                | MAT PCA | TEST                  | .95                         | TRANSFER               |                      |                   |           |                            |           |      |               |                      |   |      |
|                    |         |                       |                             | SETUP                  | -                    |                   |           |                            |           |      |               |                      |   |      |
|                    |         |                       |                             | PROCESS                | -                    |                   |           |                            |           |      |               |                      |   |      |
| 050                | MAT PCA | WELD                  | .29                         | TRANSFER               |                      |                   |           |                            |           |      |               |                      |   |      |
|                    |         |                       |                             | PROCESS                | -                    |                   |           |                            |           |      |               |                      |   |      |
|                    |         |                       |                             | PROCESS                | -                    |                   |           |                            |           |      |               |                      |   |      |
| 310                | MAT PCA | ASSY                  | .95                         | TRANSFER               |                      |                   |           |                            |           |      |               |                      |   |      |
|                    |         |                       |                             | PROCESS                | -                    |                   |           |                            |           |      |               |                      |   |      |
|                    |         |                       |                             | PROCESS                | -                    |                   |           |                            |           |      |               |                      |   |      |
| 320                | MAT PCA | ASSY                  | .95                         | TRANSFER               |                      |                   |           |                            |           |      |               |                      |   |      |
|                    |         |                       |                             | PROCESS                | -                    |                   |           |                            |           |      |               |                      |   |      |
|                    |         |                       |                             | PROCESS                | -                    |                   |           |                            |           |      |               |                      |   |      |



# OPERATION: OFFILE

| NAME <u>Parker</u> |         | ALC <u>OC</u>         |                             | DATE <u>05/08/89</u>  |                      | RCC <u>MAT PCA</u> |      | SHEET <u>3</u> OF <u>5</u> |                    |                      |                |      |                 |                    |     |     |     |     |     |     |
|--------------------|---------|-----------------------|-----------------------------|-----------------------|----------------------|--------------------|------|----------------------------|--------------------|----------------------|----------------|------|-----------------|--------------------|-----|-----|-----|-----|-----|-----|
| PCN <u>30291A</u>  |         | WCD <u>CAE805</u>     |                             | WCD DATE <u>89094</u> |                      |                    |      |                            |                    |                      |                |      |                 |                    |     |     |     |     |     |     |
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW HOURS | MANPOWER           |      | EQUIPMENT                  |                    | DATA SOURCE COMMENTS |                |      |                 |                    |     |     |     |     |     |     |
|                    |         |                       |                             |                       |                      | SKILL CODE/LEVEL   | QTY. | TIME REQUIRED %            | TIME REQUIRED HRS. |                      | EQUIPMENT CODE | QTY. | TIME REQUIRED % | TIME REQUIRED HRS. |     |     |     |     |     |     |
| 330                | MAT PCA | TEST                  | .95                         | TEST                  | -                    | BY 10              | 1    | 1.0                        | 1.0                | -                    | -              | -    | -               | -                  | -   | -   | -   | -   | -   | -   |
| 360                | MAT PCA | WELD                  | .95                         | WELD                  | -                    | BY 10              | 1    | 1.0                        | 1.0                | 1.0                  | 1.0            | 1.0  | 1.0             | 1.0                | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 365                | MAT PCA | PAINT                 | 1.0                         | PAINT                 | -                    | BY 10              | 1    | 1.0                        | 1.0                | 1.0                  | 1.0            | 1.0  | 1.0             | 1.0                | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 370                | MAT PCA | PROC                  | .95                         | PROC                  | -                    | BY 10              | 1    | 1.0                        | 1.0                | 1.0                  | 1.0            | 1.0  | 1.0             | 1.0                | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 380                | MAT PCA | INFO                  | .95                         | INFO                  | -                    | BY 10              | 1    | 1.0                        | 1.0                | 1.0                  | 1.0            | 1.0  | 1.0             | 1.0                | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |



# OPERATION FILE

NAME Packer ALC OC DATE 05/08/89 RCC MATPCA SHEET 1 OF 5

| OPERATION NUMBER | RCC | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS<br>% | SKILL CODE/LEVEL | MANPOWER |                    | EQUIPMENT |                    | DATA SOURCE COMMENTS       |
|------------------|-----|-----------------------|-----------------------------|----------------|---------------------------|------------------|----------|--------------------|-----------|--------------------|----------------------------|
|                  |     |                       |                             |                |                           |                  | QTY.     | TIME REQUIRED<br>% | QTY.      | TIME REQUIRED<br>% |                            |
| 440              | MAT | PROC                  | .95                         | PROCESS        | -                         | BY10             | 1        | 1.0 .02            | BEN21     | 1.0 .02            | Pressure unit with dry air |
| 450              | PCA | PROC                  | .95                         | PROCESS        | -                         |                  | 1        | 1.0 .05            | BEN17     | 1.0 .05            | 1-1 package water bath     |
| 460              |     | TEST                  | .95                         | SETUP          | -                         |                  | 1        | 1.0 .02            |           | -                  |                            |
| 490              |     | PW                    | 1.0                         | PROCESS        | -                         |                  | 1        | 1.0 .07            | 4929      | 1.0 .09            | SK.11 9-10                 |
| 500              |     | ASSY                  | .95                         | PROCESS        | -                         |                  | 1        | 1.0 .08            |           | -                  | SK. 9-10                   |
|                  |     |                       |                             | PROCESS        | -                         |                  | 1        | 1.0 .25            | BEN21     | 1.0 .25            | SK.11 9-10                 |



# OPERATION .OF FILE

| NAME <u>Barker</u> |         | ALC <u>OC</u>         |                             | DATE <u>05/08/89</u>  |                  | RCC <u>MAT PCA</u>  |                  | SHEET <u>5</u> OF <u>5</u> |                 |                    |                      |      |                 |                    |   |   |   |
|--------------------|---------|-----------------------|-----------------------------|-----------------------|------------------|---------------------|------------------|----------------------------|-----------------|--------------------|----------------------|------|-----------------|--------------------|---|---|---|
| PCN <u>30241A</u>  |         | WCD <u>CAEBOS</u>     |                             | WCD DATE <u>89094</u> |                  |                     |                  |                            |                 |                    |                      |      |                 |                    |   |   |   |
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANPOWER         |                     |                  | EQUIPMENT                  |                 |                    | DATA SOURCE COMMENTS |      |                 |                    |   |   |   |
|                    |         |                       |                             |                       | MANDATORY FLOW % | MANDATORY FLOW HRS. | SKILL CODE/LEVEL | QTY.                       | TIME REQUIRED % | TIME REQUIRED HRS. |                      | QTY. | TIME REQUIRED % | TIME REQUIRED HRS. |   |   |   |
| 510                | MAT PCA | PW                    | 1.0                         | PROCESS               | -                | -                   | BY10             | 1                          | 1.0.03          | -                  | -                    | -    | -               | -                  | - | - | - |
| 520                |         | PW                    | 1.0                         | PROCESS               | -                | -                   |                  | 1                          | 1.0.08          | -                  | -                    | -    | -               | -                  | - | - | - |
| 590                |         | PW                    | 1.0                         | PROCESS               | -                | -                   |                  | 1                          | 1.0.02          | -                  | -                    | -    | -               | -                  | - | - | - |
| 9999               | MAT RA  | Out Date              | 1.0                         | TRANSIT               | -                | -                   |                  |                            |                 | -                  | -                    | -    | -               | -                  | - | - | - |
|                    |         |                       |                             | SETUP                 | 1.0              | 20.0                |                  |                            |                 | -                  | -                    | -    | -               | -                  | - | - | - |
|                    |         |                       |                             | PROCESS               |                  |                     |                  |                            |                 | -                  | -                    | -    | -               | -                  | - | - | - |
|                    |         |                       |                             | TRANSIT               |                  |                     |                  |                            |                 | -                  | -                    | -    | -               | -                  | - | - | - |
|                    |         |                       |                             | SETUP                 |                  |                     |                  |                            |                 | -                  | -                    | -    | -               | -                  | - | - | - |
|                    |         |                       |                             | PROCESS               |                  |                     |                  |                            |                 | -                  | -                    | -    | -               | -                  | - | - | - |



## FLOW PROCESS CHART

SUBJECT

DATE 05/08/89

ITEM CODE  
PCN  
NRN  
FIN

\* 30241A

WCD CAEBOS

WCD DATE 89094

CHART BEGINS

010

CHART ENDS

590

PREPARED BY

MP

| OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS   | DESCRIPTION | OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS   | DESCRIPTION |
|------------------------|----------------|-----------|-------------|------------------------|----------------|-----------|-------------|
| 010                    | 010            | ○ ○ ○ □ ▽ | REC         |                        |                | ○ ○ ○ □ ▽ |             |
| 015                    | 015            | ○ ○ ○ □ ▽ | INFO        |                        |                | ○ ○ ○ □ ▽ |             |
| 017                    | -              | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 020                    | 020            | ○ ○ ○ □ ▽ | INSP        |                        |                | ○ ○ ○ □ ▽ |             |
| 030                    | 030            | ○ ○ ○ □ ▽ | MACH        |                        |                | ○ ○ ○ □ ▽ |             |
| 040                    | 040            | ○ ○ ○ □ ▽ | DIS         |                        |                | ○ ○ ○ □ ▽ |             |
| 045                    | -              | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 050                    | 050            | ○ ○ ○ □ ▽ | WELD        |                        |                | ○ ○ ○ □ ▽ |             |
| 310                    | 310            | ○ ○ ○ □ ▽ | ASSY        |                        |                | ○ ○ ○ □ ▽ |             |
| 320                    | 310            | ○ ○ ○ □ ▽ | ASSY        |                        |                | ○ ○ ○ □ ▽ |             |
| 330                    | -              | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 360                    | 360            | ○ ○ ○ □ ▽ | WELD        |                        |                | ○ ○ ○ □ ▽ |             |
| 365                    | 365            | ○ ○ ○ □ ▽ | Paint       |                        |                | ○ ○ ○ □ ▽ |             |
| 370                    | -              | ○ ○ ○ □ ▽ | Heat        |                        |                | ○ ○ ○ □ ▽ |             |
| 380                    | 380            | ○ ○ ○ □ ▽ | INFO        |                        |                | ○ ○ ○ □ ▽ |             |
| 440                    | 440            | ○ ○ ○ □ ▽ | Pressurize  |                        |                | ○ ○ ○ □ ▽ |             |
| 450                    | 450            | ○ ○ ○ □ ▽ | Leak test   |                        |                | ○ ○ ○ □ ▽ |             |
| 460                    | 460            | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 490                    | 490            | ○ ○ ○ □ ▽ | Paperwork   |                        |                | ○ ○ ○ □ ▽ |             |
| 500                    | 500            | ○ ○ ○ □ ▽ | Safety wire |                        |                | ○ ○ ○ □ ▽ |             |
| 510                    | 510            | ○ ○ ○ □ ▽ | Paperwork   |                        |                | ○ ○ ○ □ ▽ |             |
| 520                    | 520            | ○ ○ ○ □ ▽ | Paperwork   |                        |                | ○ ○ ○ □ ▽ |             |
| 590                    | 590            | ○ ○ ○ □ ▽ | Paperwork   |                        |                | ○ ○ ○ □ ▽ |             |
|                        |                | ○ ○ ○ □ ▽ |             |                        |                | ○ ○ ○ □ ▽ |             |
|                        |                | ○ ○ ○ □ ▽ |             |                        |                | ○ ○ ○ □ ▽ |             |
|                        |                | ○ ○ ○ □ ▽ |             |                        |                | ○ ○ ○ □ ▽ |             |
|                        |                | ○ ○ ○ □ ▽ |             |                        |                | ○ ○ ○ □ ▽ |             |
|                        |                | ○ ○ ○ □ ▽ |             |                        |                | ○ ○ ○ □ ▽ |             |
|                        |                | ○ ○ ○ □ ▽ |             |                        |                | ○ ○ ○ □ ▽ |             |
|                        |                | ○ ○ ○ □ ▽ |             |                        |                | ○ ○ ○ □ ▽ |             |
|                        |                | ○ ○ ○ □ ▽ |             |                        |                | ○ ○ ○ □ ▽ |             |
|                        |                | ○ ○ ○ □ ▽ |             |                        |                | ○ ○ ○ □ ▽ |             |
|                        |                | ○ ○ ○ □ ▽ |             |                        |                | ○ ○ ○ □ ▽ |             |
|                        |                | ○ ○ ○ □ ▽ |             |                        |                | ○ ○ ○ □ ▽ |             |

○ OPERATION

◇ TRANSPORTATION

▽ STORAGE

D DELAY

□ INSPECTION

LSC-20147



# OPERATION PROFILE

| NAME <u>J Carter</u> |        | ALC <u>OC</u>         |                             | DATE <u>11/28/88</u>   |                      | RCC <u>MATPCA</u> |           | SHEET <u>2</u> OF <u>2</u> |           |                |                 |                    |                      |
|----------------------|--------|-----------------------|-----------------------------|------------------------|----------------------|-------------------|-----------|----------------------------|-----------|----------------|-----------------|--------------------|----------------------|
| ECU <u>31151A</u>    |        | WCD <u>CA2222</u>     |                             | WCD DATE <u>882191</u> |                      |                   |           |                            |           |                |                 |                    |                      |
| OPERATION NUMBER     | RCC    | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE         | MANDATORY FLOW HOURS |                   | MAINPOWER |                            | EQUIPMENT |                | TIME REQUIRED % | TIME REQUIRED HRS. | DATA SOURCE COMMENTS |
|                      |        |                       |                             |                        | %                    | HRS.              | QTY.      | SKILL CODE/LEVEL           | QTY.      | EQUIPMENT CODE |                 |                    |                      |
| 00                   | MATPCA | IN DATE               | 1.0                         | TRANSIT                | 1.0                  | 24.0              |           |                            |           |                |                 |                    |                      |
|                      |        |                       |                             | SETUP                  |                      |                   |           |                            |           |                |                 |                    |                      |
|                      |        |                       |                             | PROCESS                |                      |                   |           |                            |           |                |                 |                    |                      |
|                      |        |                       |                             | TRANSIT                |                      |                   |           |                            |           |                |                 |                    |                      |
|                      |        |                       |                             | SETUP                  |                      |                   |           |                            |           |                |                 |                    |                      |
|                      |        |                       |                             | PROCESS                |                      |                   |           |                            |           |                |                 |                    |                      |
|                      |        |                       |                             | TRANSIT                |                      |                   |           |                            |           |                |                 |                    |                      |
|                      |        |                       |                             | SETUP                  |                      |                   |           |                            |           |                |                 |                    |                      |
|                      |        |                       |                             | PROCESS                |                      |                   |           |                            |           |                |                 |                    |                      |
|                      |        |                       |                             | TRANSIT                |                      |                   |           |                            |           |                |                 |                    |                      |
|                      |        |                       |                             | SETUP                  |                      |                   |           |                            |           |                |                 |                    |                      |
|                      |        |                       |                             | PROCESS                |                      |                   |           |                            |           |                |                 |                    |                      |
|                      |        |                       |                             | TRANSIT                |                      |                   |           |                            |           |                |                 |                    |                      |
|                      |        |                       |                             | SETUP                  |                      |                   |           |                            |           |                |                 |                    |                      |
|                      |        |                       |                             | PROCESS                |                      |                   |           |                            |           |                |                 |                    |                      |
|                      |        |                       |                             | TRANSIT                |                      |                   |           |                            |           |                |                 |                    |                      |
|                      |        |                       |                             | SETUP                  |                      |                   |           |                            |           |                |                 |                    |                      |
|                      |        |                       |                             | PROCESS                |                      |                   |           |                            |           |                |                 |                    |                      |

NOTE: THIS SHEET FOR IN-OUT DATES



# OPERATION PROFILE

| NAME <u>J. CARTER</u> ALC <u>OC</u> DATE <u>4-28-89</u> RCC <u>MAT PCA</u> SHEET <u>1</u> OF <u>2</u> |         |                       |                             |                |                      |                  |      |                 |                    |                |      |                 |                    |                      |
|---|---------|-----------------------|-----------------------------|----------------|----------------------|------------------|------|-----------------|--------------------|----------------|------|-----------------|--------------------|----------------------|
| WCD <u>CA2222</u> WCD DATE <u>89094</u>   |         |                       |                             |                |                      |                  |      |                 |                    |                |      |                 |                    |                      |
| PRN <u>31151A</u>   |         |                       |                             |                |                      |                  |      |                 |                    |                |      |                 |                    |                      |
| OPERATION NUMBER  | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS | SKILL CODE/LEVEL | QTY. | TIME REQUIRED % | TIME REQUIRED HRS. | EQUIPMENT CODE | QTY. | TIME REQUIRED % | TIME REQUIRED HRS. | DATA SOURCE COMMENTS |
| 010   | MAT PCA | REC                   | 1.00                        | TRANSIT        | -                    | -                | -    | -               | -                  | -              | -    | -               | -                  | -                    |
|   |         |                       |                             | SETUP          | -                    | -                | -    | -               | -                  | -              | -    | -               | -                  | -                    |
|   |         |                       |                             | PROCESS        | -                    | -                | -    | -               | -                  | -              | -    | -               | -                  | -                    |
| 020   | MAT PCA | DIS                   | 1.00                        | TRANSIT        | -                    | -                | -    | -               | -                  | -              | -    | -               | -                  | -                    |
|   |         |                       |                             | SETUP          | -                    | -                | -    | -               | -                  | -              | -    | -               | -                  | -                    |
|   |         |                       |                             | PROCESS        | -                    | -                | -    | -               | -                  | -              | -    | -               | -                  | -                    |
| 030   |         | CLEAN                 | 1.00                        | TRANSIT        | -                    | -                | -    | -               | -                  | -              | -    | -               | -                  | -                    |
|   |         |                       |                             | SETUP          | -                    | -                | -    | -               | -                  | -              | -    | -               | -                  | -                    |
|   |         |                       |                             | PROCESS        | -                    | -                | -    | -               | -                  | -              | -    | -               | -                  | -                    |
| 040   |         | INSP                  | 1.00                        | TRANSIT        | -                    | -                | -    | -               | -                  | -              | -    | -               | -                  | -                    |
|   |         |                       |                             | SETUP          | -                    | -                | -    | -               | -                  | -              | -    | -               | -                  | -                    |
|   |         |                       |                             | PROCESS        | -                    | -                | -    | -               | -                  | -              | -    | -               | -                  | -                    |
| 050   |         | REP                   | 1.00                        | TRANSIT        | -                    | -                | -    | -               | -                  | -              | -    | -               | -                  | -                    |
|   |         |                       |                             | SETUP          | -                    | -                | -    | -               | -                  | -              | -    | -               | -                  | -                    |
|   |         |                       |                             | PROCESS        | -                    | -                | -    | -               | -                  | -              | -    | -               | -                  | -                    |



# OPERATION JFILE

| NAME <u>J. Carter</u> |                     | ALC <u>OC</u>         |                             | DATE <u>4/28/89</u>   |                      | RCC <u>MATPCA</u> |      | SHEET <u>2</u> OF <u>2</u> |          |
|-----------------------|---------------------|-----------------------|-----------------------------|-----------------------|----------------------|-------------------|------|----------------------------|----------|
| CSPD                  |                     | WCD <u>CA2222</u>     |                             | WCD DATE <u>89094</u> |                      |                   |      |                            |          |
| OPERATION NUMBER      | RCC                 | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW HOURS | MANPOWER          |      | EQUIPMENT                  |          |
|                       |                     |                       |                             |                       | %                    | HRS.              | QTY. | %                          | HRS.     |
| 060                   | MAT<br>PCA          | ASS                   | 1.00                        | TRANSIT               | —                    | —                 | —    | —                          | —        |
|                       |                     |                       |                             | SETUP                 | —                    | —                 | —    | —                          | —        |
|                       |                     |                       |                             | PROCESS               | —                    | —                 | —    | —                          | —        |
|                       |                     |                       |                             |                       | AY                   | 09                | 1    | 1.0                        | .75      |
|                       |                     |                       |                             |                       |                      |                   |      |                            | 28 BENCH |
| 070                   |                     | TEST                  | 1.00                        | TRANSIT               | —                    | —                 | —    | —                          | —        |
|                       |                     |                       |                             | SETUP                 | —                    | —                 | —    | —                          | —        |
|                       |                     |                       |                             | PROCESS               | —                    | —                 | —    | —                          | —        |
|                       |                     |                       |                             |                       |                      |                   | 1    | 1.0                        | .20      |
|                       |                     |                       |                             |                       |                      |                   |      |                            | 28 BENCH |
| 080                   |                     | PN                    | 1.00                        | TRANSIT               | —                    | —                 | —    | —                          | —        |
|                       |                     |                       |                             | SETUP                 | —                    | —                 | —    | —                          | —        |
|                       |                     |                       |                             | PROCESS               | —                    | —                 | —    | —                          | —        |
|                       |                     |                       |                             |                       |                      |                   | 1    | 1.0                        | .1       |
|                       |                     |                       |                             |                       |                      |                   |      |                            | 28 BENCH |
| 090                   |                     | PN                    | 1.00                        | TRANSIT               | —                    | —                 | —    | —                          | —        |
|                       |                     |                       |                             | SETUP                 | —                    | —                 | —    | —                          | —        |
|                       |                     |                       |                             | PROCESS               | —                    | —                 | —    | —                          | —        |
|                       |                     |                       |                             |                       |                      |                   | 1    | 1.0                        | .1       |
|                       |                     |                       |                             |                       |                      |                   |      |                            | 28 BENCH |
| 100                   |                     | PN                    | 1.00                        | TRANSIT               | —                    | —                 | —    | —                          | —        |
|                       |                     |                       |                             | SETUP                 | —                    | —                 | —    | —                          | —        |
|                       |                     |                       |                             | PROCESS               | —                    | —                 | —    | —                          | —        |
|                       |                     |                       |                             |                       |                      |                   | 1    | 1.0                        | .10      |
|                       |                     |                       |                             |                       |                      |                   |      |                            | 28 BENCH |
| 9999                  | MAT out<br>PCA Date |                       | 1.0                         | Process               | 1.0                  | 9.6               |      |                            |          |







NOTE: Added Lines  
Equipment blocks  
OPERATION

| NAME <u>J. CARTER</u> ALC <u>OC</u> DATE <u>4-27-82</u> RCC <u>MAT PCA</u> SHEET <u>1</u> OF <u>5</u> |         | WCD <u>CAEC04</u>     |                             | WCD DATE <u>82-04-5</u> |                      | MANPOWER |       | EQUIPMENT     |      | DATA SOURCE COMMENTS |      |               |       |
|---|---------|-----------------------|-----------------------------|-------------------------|----------------------|----------|-------|---------------|------|----------------------|------|---------------|-------|
| OPERATION NUMBER  | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE          | MANDATORY FLOW HOURS |          | QTY.  | TIME REQUIRED |      | EQUIPMENT CODE       | QTY. | TIME REQUIRED |       |
|   |         |                       |                             |                         | %                    | HRS.     |       | %             | HRS. |                      |      |               |       |
| 00  | MAT PCA | IN Date               | 1.0                         | TRANSIT                 | 1.0                  | 20       |       |               |      |                      |      |               |       |
|   |         |                       |                             | SETUP                   |                      |          |       |               |      |                      |      |               |       |
|   |         |                       |                             | PROCESS                 |                      |          |       |               |      |                      |      |               |       |
| 010   | MAT PCA | REC                   | 1.000                       | TRANSIT                 |                      |          | BY-10 |               |      |                      |      |               | BENCH |
|   |         |                       |                             | SETUP                   |                      |          |       |               |      |                      |      |               |       |
|   |         |                       |                             | PROCESS                 |                      |          |       |               |      |                      |      |               |       |
| 015   |         | PW                    | 1.000                       | TRANSIT                 |                      |          |       |               |      |                      |      |               | BENCH |
|   |         |                       |                             | SETUP                   |                      |          |       |               |      |                      |      |               |       |
|   |         |                       |                             | PROCESS                 |                      |          |       |               |      |                      |      |               |       |
| 020   |         | DIS                   | 1.000                       | TRANSIT                 |                      |          |       |               |      |                      |      |               | BENCH |
|   |         |                       |                             | SETUP                   |                      |          |       |               |      |                      |      |               |       |
|   |         |                       |                             | PROCESS                 |                      |          |       |               |      |                      |      |               |       |
| 030   |         | CLN                   | 1.000                       | TRANSIT                 |                      |          |       |               |      |                      |      |               | BENCH |
|   |         |                       |                             | SETUP                   |                      |          |       |               |      |                      |      |               |       |
|   |         |                       |                             | PROCESS                 |                      |          |       |               |      |                      |      |               |       |
| CLEANING TANK - NO NUMBER   |         |                       |                             |                         |                      |          |       |               |      |                      |      |               |       |



# OPERATION PROFILE

| NAME <u>J. CARTER</u> ALC <u>OC</u> DATE <u>11-27-89</u> RCC <u>MAT PCA</u> SHEET <u>2</u> OF <u>2</u> |         | WCD <u>CAECO4</u> WCD DATE <u>89045</u> |                             |                |                                |                  |      |                         |                |      |                         |                      |
|--|---------|---|-----------------------------|----------------|--------------------------------|------------------|------|-------------------------|----------------|------|-------------------------|----------------------|
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION                   | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS<br>% HRS. | SKILL CODE/LEVEL | QTY. | TIME REQUIRED<br>% HRS. | EQUIPMENT CODE | QTY. | TIME REQUIRED<br>% HRS. | DATA SOURCE COMMENTS |
| 040  | MAT PCA | INSPECTION                              | 1.000                       | TRANSIT        | 1.00                           | BY-10            | 1    | 1.00                    | 4929           | 1    | 1.00                    |                      |
| 060  |         | TEST                                    | 1.00                        | TRANSIT        | 1.00                           |                  | 1    | 1.00                    | 4929           | 1    | 1.00                    |                      |
| 070  |         | TEST                                    | 1.00                        | TRANSIT        | 1.00                           |                  | 1    | 1.00                    | 4929           | 1    | 1.00                    |                      |
| 070  |         | TEST                                    | 1.00                        | TRANSIT        | 1.00                           |                  | 1    | 1.00                    | 4929           | 1    | 1.00                    |                      |
| 080  |         | TEST                                    | 1.00                        | TRANSIT        | 1.00                           | BY-10            | 1    | 1.00                    | 4929           | 1    | 1.00                    |                      |



# OPERATION FILE

| NAME <u>JACK CARTER</u> ALC <u>OC</u> DATE <u>4-27-89</u> RCC <u>MAT PCA</u> SHEET <u>3</u> OF <u>3</u> |                   | WCD <u>CAECCO4</u> WCD DATE <u>          </u> |                             |                |                                |                              |      |                         |                |      |                         |                      |
|---|-------------------|---|-----------------------------|----------------|--------------------------------|------------------------------|------|-------------------------|----------------|------|-------------------------|----------------------|
| PCN   | NSN               | PHI   | WCD                         |                |                                |                              |      |                         |                |      |                         |                      |
| <u>34044A</u>   | <u>          </u> | <u>          </u>                             | <u>          </u>           |                |                                |                              |      |                         |                |      |                         |                      |
| OPERATION NUMBER  | RCC               | OPERATION DESCRIPTION                         | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS<br>% HRS. | MANPOWER<br>SKILL CODE/LEVEL | QTY. | TIME REQUIRED<br>% HRS. | EQUIPMENT CODE | QTY. | TIME REQUIRED<br>% HRS. | DATA SOURCE COMMENTS |
| 090   | MAT PCA           | TEST  | 1.00                        | TRANSIT        | -                              | -                            | -    | -                       | -              | -    | -                       | -                    |
|   |                   |   |                             | SETUP          | -                              | -                            | -    | -                       | -              | -    | -                       |                      |
|   |                   |   |                             | PROCESS        | -                              | -                            | -    | -                       | -              | -    | -                       |                      |
| 100   | PCA               | TEST  | 1.00                        | TRANSIT        | -                              | -                            | -    | -                       | -              | -    | -                       | -                    |
|   |                   |   |                             | SETUP          | -                              | -                            | -    | -                       | -              | -    | -                       | -                    |
|   |                   |   |                             | PROCESS        | -                              | -                            | -    | -                       | -              | -    | -                       | -                    |
| 110   | PCA               | TEST  | 1.00                        | TRANSIT        | -                              | -                            | -    | -                       | -              | -    | -                       | -                    |
|   |                   |   |                             | SETUP          | -                              | -                            | -    | -                       | -              | -    | -                       | -                    |
|   |                   |   |                             | PROCESS        | -                              | -                            | -    | -                       | -              | -    | -                       | -                    |
| 120   | PCA               | TEST  | 1.00                        | TRANSIT        | -                              | -                            | -    | -                       | -              | -    | -                       | -                    |
|   |                   |   |                             | SETUP          | -                              | -                            | -    | -                       | -              | -    | -                       | -                    |
|   |                   |   |                             | PROCESS        | -                              | -                            | -    | -                       | -              | -    | -                       | -                    |
| 380   | PCA               | REP   | 1.00                        | TRANSIT        | -                              | -                            | -    | -                       | -              | -    | -                       | -                    |
|   |                   |   |                             | SETUP          | -                              | -                            | -    | -                       | -              | -    | -                       | -                    |
|   |                   |   |                             | PROCESS        | -                              | -                            | -    | -                       | -              | -    | -                       | -                    |



# OPERATION FILE

| NAME <u>J. CARTER</u> |         | ALC _____             |                             | DATE _____     |                      | RCC _____       |                  | SHEET <u>4</u> OF _____ |               |      |                |      |               |      |  |
|-----------------------|---------|-----------------------|-----------------------------|----------------|----------------------|-----------------|------------------|-------------------------|---------------|------|----------------|------|---------------|------|--|
| PCN <u>39044A</u>     |         | WCD _____             |                             | WCD DATE _____ |                      | MAINPOWER _____ |                  | EQUIPMENT _____         |               |      |                |      |               |      |  |
| OPERATION NUMBER      | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |                 | SKILL CODE/LEVEL | QTY.                    | TIME REQUIRED |      | EQUIPMENT CODE | QTY. | TIME REQUIRED |      | DATA SOURCE COMMENTS                       |
|                       |         |                       |                             |                | %                    | HRS.            |                  |                         | %             | HRS. |                |      | %             | HRS. |  |
| 390                   | MAT PCA | ASS'Y                 |                             | TRANSIT        | —                    | —               | B410             | 1                       | —             | —    | 6              | 1    | —             | —    | COMBINED WITH OP 440 PER ALT FAB. METHOD.  |
|                       |         |                       |                             | SETUP          | —                    | —               |                  |                         | —             | —    |                |      | —             | —    |  |
|                       |         |                       |                             | PROCESS        | —                    | —               |                  |                         | —             | —    |                |      | —             | —    |  |
| 460                   |         | TEST                  | 1:0                         | TRANSIT        | —                    | —               |                  | 1                       | —             | —    |                | 1    | —             | —    | TEST BENCH                                 |
|                       |         |                       |                             | SETUP          | —                    | —               |                  |                         | —             | —    |                |      | —             | —    |  |
|                       |         |                       |                             | PROCESS        | —                    | —               |                  |                         | —             | —    |                |      | —             | —    |  |
| 520                   |         | BAKE                  |                             | TRANSIT        | —                    | —               |                  | 1                       | —             | —    | OC3953         | 1    | —             | —    | EPOXY FILL & OVEN BAKE                     |
|                       |         |                       |                             | SETUP          | —                    | —               |                  |                         | —             | —    |                |      | —             | —    |  |
|                       |         |                       |                             | PROCESS        | 1.0                  | 3.0             |                  |                         | —             | —    |                |      | —             | —    |  |
| 525                   |         | ASS'Y                 |                             | TRANSIT        | —                    | —               |                  | 1                       | —             | —    |                | 1    | —             | —    | NOTE: CASE IS SOLDER. SEALED AT THIS OPER. |
|                       |         |                       |                             | SETUP          | —                    | —               |                  |                         | —             | —    |                |      | —             | —    |  |
|                       |         |                       |                             | PROCESS        | —                    | —               |                  |                         | —             | —    |                |      | —             | —    |  |
| 530                   |         | TEST                  |                             | TRANSIT        | —                    | —               | B410             | 1                       | —             | —    | OC3954         | 1    | —             | —    |  |
|                       |         |                       |                             | SETUP          | —                    | —               |                  |                         | —             | —    |                |      | —             | —    |  |
|                       |         |                       |                             | PROCESS        | —                    | —               |                  |                         | —             | —    |                |      | —             | —    |  |



# OPERATION FILE

| NAME _____       |            | ALC _____             |                             | DATE _____     |                        | RCC _____         |      | SHEET 5 OF _____ |      |                      |      |               |      |
|------------------|------------|-----------------------|-----------------------------|----------------|------------------------|-------------------|------|------------------|------|----------------------|------|---------------|------|
| PCN HSN PHN      |            | WCD                   |                             | WCD DATE       |                        | MANPOWER          |      | EQUIPMENT        |      | DATA SOURCE COMMENTS |      |               |      |
| OPERATION NUMBER | RCC        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS % | SKILL CODE/ LEVEL | QTY. | TIME REQUIRED    |      | EQUIPMENT CODE       | QTY. | TIME REQUIRED |      |
|                  |            |                       |                             |                |                        |                   |      | %                | HRS. |                      |      | %             | HRS. |
| 540              | MAT<br>PCA | TEST                  | 1.00                        | TRANSIT        | 1.0                    | BY 10             | 1    | 1.0              | 1.0  | PC-3953              | 1    | 1.0           | 1.0  |
|                  |            |                       |                             | SETUP          | 1.0                    |                   |      | 1.0              | 1.0  |                      |      | 1.0           |      |
|                  |            |                       |                             | PROCESS        | 1.0                    |                   |      | 1.0              | 1.0  |                      |      | 1.0           |      |
| 560              |            | PROC                  | 1.00                        | TRANSIT        | 1.0                    |                   | 1    | 1.0              | 1.0  |                      | 1    | 1.0           | 1.0  |
|                  |            |                       |                             | SETUP          | 1.0                    |                   |      | 1.0              | 1.0  |                      |      | 1.0           |      |
|                  |            |                       |                             | PROCESS        | 1.0                    |                   |      | 1.0              | 1.0  |                      |      | 1.0           |      |
| 570              |            | TEST                  | 1.00                        | TRANSIT        | 1.0                    |                   | 1    | 1.0              | 1.0  | OC 4929              | 1    | 1.0           | 1.0  |
|                  |            |                       |                             | SETUP          | 1.0                    |                   |      | 1.0              | 1.0  |                      |      | 1.0           |      |
|                  |            |                       |                             | PROCESS        | 1.0                    |                   |      | 1.0              | 1.0  |                      |      | 1.0           |      |
| 650              |            | PROC                  |                             | TRANSIT        | 1.0                    |                   | 1    | 1.0              | 1.0  |                      | 1    | 1.0           | 1.0  |
|                  |            |                       |                             | SETUP          | 1.0                    |                   |      | 1.0              | 1.0  |                      |      | 1.0           |      |
|                  |            |                       |                             | PROCESS        | 1.0                    |                   |      | 1.0              | 1.0  |                      |      | 1.0           |      |
| 670              | MAT<br>PCA | PW                    | 1.00                        | TRANSIT        | 1.0                    |                   | 1    | 1.0              | 1.0  | BENCH                | 1    | 1.0           | 1.0  |
|                  |            |                       |                             | SETUP          | 1.0                    |                   |      | 1.0              | 1.0  |                      |      | 1.0           |      |
|                  |            |                       |                             | PROCESS        | 1.0                    |                   |      | 1.0              | 1.0  |                      |      | 1.0           |      |
| 9999             |            | out Date              | 1.0                         | Process        | 1.0                    |                   |      | 1.0              | 1.0  |                      |      | 1.0           | 1.0  |



# OPERATION PROFILE

| NAME <u>J. CARTER</u> |         | ALC <u>OC</u>         |                              | DATE <u>4-27-89</u>   |                  | NCC <u>MAT PCA</u> |                 | SHEET <u>6</u> OF <u>6</u> |  |
|-----------------------|---------|-----------------------|------------------------------|-----------------------|------------------|--------------------|-----------------|----------------------------|--|
| PCH <u>34044A</u>     |         | WCD <u>CAECD4</u>     |                              | WCD DATE <u>89045</u> |                  |                    |                 |                            |  |
| OPERATION NUMBER      | NCC     | OPERATION DESCRIPTION | LABORATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANPOWER         | EQUIPMENT          |                 | DATA SOURCE COMMENTS       |  |
|                       |         |                       |                              |                       | SKILL CODE/LEVEL | QTY.               | TIME REQUIRED % | INS.                       |  |
|                       |         |                       |                              |                       |                  |                    | %               | INS.                       |  |
| 580                   | MAT PCA | PH                    | 1.0                          | TRANSIT               | BY               | 1.0                | 1.0             | 1.0                        |  |
|                       |         |                       |                              | SETUP                 | 10               |                    |                 |                            |  |
|                       |         |                       |                              | PROCESS               |                  |                    |                 |                            |  |
| 9999                  |         | out date              | 1.0                          | TRANSIT               |                  |                    |                 |                            |  |
|                       |         |                       |                              | SETUP                 |                  |                    |                 |                            |  |
|                       |         |                       |                              | PROCESS               |                  |                    |                 |                            |  |
|                       |         |                       |                              | TRANSIT               |                  |                    |                 |                            |  |
|                       |         |                       |                              | SETUP                 |                  |                    |                 |                            |  |
|                       |         |                       |                              | PROCESS               |                  |                    |                 |                            |  |
|                       |         |                       |                              | TRANSIT               |                  |                    |                 |                            |  |
|                       |         |                       |                              | SETUP                 |                  |                    |                 |                            |  |
|                       |         |                       |                              | PROCESS               |                  |                    |                 |                            |  |

|               |               |                  |     |     |     |     |     |
|---------------|---------------|------------------|-----|-----|-----|-----|-----|
| NAME <u>8</u> | NSH <u>30</u> | OPERATION NUMBER | 040 | 045 | 050 | 310 | 320 |
|---------------|---------------|------------------|-----|-----|-----|-----|-----|



#3044A

## FLOW PROCESS CHART

SUBJECT IGNITION EXCITERDATE 5-2-89

ITEM CODE

PCN

MM

PIN

□

□

□

WCD CAEC04 WCD DATE 89045CHART BEGINS OPER# 010CHART ENDS OPR # 680PREPARED BY LARTER

| OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS        | DESCRIPTION             | OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS        | DESCRIPTION |
|------------------------|----------------|----------------|-------------------------|------------------------|----------------|----------------|-------------|
| 010                    | 010            | ●○○□▽          | REC                     |                        |                | ○○○□▽          |             |
| 015                    | 015            | ●○○□▽          | VERIFY                  |                        |                | ○○○□▽          |             |
| 020                    | 020            | ●○○□▽          | DISASSEMBLE             |                        |                | ○○○□▽          |             |
| 030                    | 030            | ●○○□▽          | CLEAN                   |                        |                | ○○○□▽          |             |
| 040                    | 040            | ●○○□▽          | VIS INSP.               |                        |                | ○○○□▽          |             |
| 050                    | 050            | ●○○□▽          | TEST                    |                        |                | ○○○□▽          |             |
| 060                    | 060            | ●○○□▽          |                         |                        |                | ○○○□▽          |             |
| 070                    | 070            | ●○○□▽          |                         |                        |                | ○○○□▽          |             |
| 080                    | 080            | ●○○□▽          |                         |                        |                | ○○○□▽          |             |
| 090                    | 090            | ●○○□▽          |                         |                        |                | ○○○□▽          |             |
| 100                    | 100            | ●○○□▽          |                         |                        |                | ○○○□▽          |             |
| 110                    | 110            | ●○○□▽          |                         |                        |                | ○○○□▽          |             |
| 120                    | 120            | ●○○□▽          | TEST                    |                        |                | ○○○□▽          |             |
| 380                    | 380            | ●○○□▽          | REPAIR                  |                        |                | ○○○□▽          |             |
| 390                    | 390            | ○○○□▽<br>●○○□▽ | RE ASSEMBLE<br>& TORQUE |                        |                | ○○○□▽<br>○○○□▽ |             |
|                        | 440            | ○○○□▽          | COMBINE                 |                        |                | ○○○□▽          |             |
| 460                    | 460            | ●○○□▽          | TEST                    |                        |                | ○○○□▽          |             |
| 520                    | 520            | ●○○□▽          | POT & BAKE              |                        |                | ○○○□▽          |             |
| 525                    | 525            | ●○○□▽          | SOLDER SEAL             |                        |                | ○○○□▽          |             |
| 530                    | 530            | ●○○□▽          | LEAK TEST               |                        |                | ○○○□▽          |             |
| 540                    | 540            | ●○○□▽          | TEST                    |                        |                | ○○○□▽          |             |
| 560                    | 560            | ●○○□▽          | PAINT                   |                        |                | ○○○□▽          |             |
| 570                    | 570            | ●○○□▽          | FINAL TEST              |                        |                | ○○○□▽          |             |
| 650                    | 650            | ●○○□▽          | SAF WIRE                |                        |                | ○○○□▽          |             |
| 660                    | 660            | ●○○□▽          | CERT                    |                        |                | ○○○□▽          |             |
| 670                    | 670            | ●○○□▽          | COMPLY                  |                        |                | ○○○□▽          |             |
| 680                    | 680            | ●○○□▽          | COMPLY                  |                        |                | ○○○□▽          |             |
|                        |                | ○○○□▽          |                         |                        |                | ○○○□▽          |             |
|                        |                | ○○○□▽          |                         |                        |                | ○○○□▽          |             |
|                        |                | ○○○□▽          |                         |                        |                | ○○○□▽          |             |
|                        |                | ○○○□▽          |                         |                        |                | ○○○□▽          |             |

○ OPERATION

◇ TRANSPORTATION

▽ STORAGE

D DELAY

□ INSPECTION

LSC-20147



**OPERATION FILE**

NAME J. CARTER ALG OC DATE 5-5-89 RCC MAT PCA SHEET 1 OF 4

SHEET 1 OF 4

WCD DATE 88307

WCD CAE Y08

34128 A

| OPERATION NUMBER | RCG        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |      | SKILL CODE/LEVEL | MANPOWER |   | EQUIPMENT |      | DATA SOURCE COMMENTS |          |
|------------------|------------|-----------------------|-----------------------------|----------------|----------------------|------|------------------|----------|---|-----------|------|----------------------|----------|
|                  |            |                       |                             |                | %                    | HRS. |                  | QTY.     | % | HRS.      | QTY. |                      | %        |
| 00               | MAT<br>PCA | IN<br>DATE            | 1.0                         | TRANSIT        |                      |      |                  |          |   |           |      |                      |          |
|                  |            |                       |                             | SETUP          |                      |      |                  |          |   |           |      |                      |          |
|                  |            |                       |                             | PROCESS        | 1.0                  | 32.0 |                  |          |   |           |      |                      |          |
| 010              | MAT<br>PCA | PW                    | 1.0                         | TRANSIT        |                      |      | BY 09            |          |   |           |      | BATCH 1075           |          |
|                  |            |                       |                             | SETUP          |                      |      |                  |          |   |           |      |                      | OF 6 EA. |
|                  |            |                       |                             | PROCESS        |                      |      |                  |          |   |           |      |                      |          |
| 015              |            | PW                    | 1.0                         | TRANSIT        |                      |      |                  |          |   |           |      |                      |          |
|                  |            |                       |                             | SETUP          |                      |      |                  |          |   |           |      |                      |          |
|                  |            |                       |                             | PROCESS        |                      |      |                  |          |   |           |      |                      |          |
| 017              |            | PROC                  | 1.0                         | TRANSIT        |                      |      | BY 09            |          |   |           |      | HEAT TREAT           |          |
|                  |            |                       |                             | SETUP          |                      |      |                  |          |   |           |      |                      |          |
|                  |            |                       |                             | PROCESS        |                      |      |                  |          |   |           |      |                      |          |
| 020              | MAT<br>PCA | DISASS                | 1.0                         | TRANSIT        |                      |      |                  |          |   |           |      |                      |          |
|                  |            |                       |                             | SETUP          |                      |      |                  |          |   |           |      |                      |          |
|                  |            |                       |                             | PROCESS        |                      |      |                  |          |   |           |      |                      |          |



# OPERATION FILE

NAME J. CARTER ALC OC DATE 5/5/89 RCC MATPCA SHEET 2 OF 3

WCD CAEY08 WCD DATE 88 30 2

| OPERATION NUMBER | RCC    | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |      |                  | MANPOWER |     |      | EQUIPMENT      |      |     | TIME REQUIRED |                            | DATA SOURCE COMMENTS |
|------------------|--------|-----------------------|-----------------------------|----------------|----------------------|------|------------------|----------|-----|------|----------------|------|-----|---------------|----------------------------|----------------------|
|                  |        |                       |                             |                | %                    | HRS. | SKILL CODE/LEVEL | QTY.     | %   | HRS. | EQUIPMENT CODE | QTY. | %   | HRS.          |                            |                      |
| 030              | MATPCA | CLEAN                 | 1.0                         | TRANSIT        | 1.0                  | .50  |                  |          |     |      |                |      |     |               |                            | HEAT TREAT           |
|                  |        |                       |                             | SETUP          |                      |      |                  |          |     |      |                |      |     |               |                            |                      |
|                  |        |                       |                             | PROCESS        | 1.0                  | 24   |                  |          |     |      |                |      |     |               |                            |                      |
| 035              | MATPCA | CLEAN                 | 1.0                         | TRANSIT        |                      |      | BY               |          |     |      |                |      |     |               |                            | ADDED SAND BLAST     |
|                  |        |                       |                             | SETUP          |                      |      | 07               |          |     |      |                |      |     |               |                            |                      |
|                  |        |                       |                             | PROCESS        |                      |      |                  | 1        | 1.0 | .05  | BEN 26         | 1    | 1.0 | .05           |                            |                      |
| 040              | MATPCA | PROC                  | 1.0                         | TRANSIT        |                      |      |                  |          |     |      |                |      |     |               |                            | INSPECT STRAIGHTEN   |
|                  |        |                       |                             | SETUP          |                      |      |                  |          |     |      |                |      |     |               |                            |                      |
|                  |        |                       |                             | PROCESS        |                      |      |                  | 1        | 1.0 | .10  | BEN 24         | 1    | 1.0 | .10           |                            |                      |
| 045              | MT PIT | INSP                  | 1.0                         | TRANSIT        | 1.0                  | .25  |                  |          |     |      |                |      |     |               | FPI INSP. NOTE: 3 TO 7 HRS |                      |
|                  |        |                       |                             | SETUP          |                      |      |                  |          |     |      |                |      |     |               |                            |                      |
|                  |        |                       |                             | PROCESS        | 1                    | 504  |                  |          |     |      |                |      |     |               |                            |                      |
| 050              | MT PIT | MOVE                  | 1.0                         | TRANSIT        | 1                    | .25  |                  |          |     |      |                |      |     |               |                            |                      |
|                  |        |                       |                             | SETUP          |                      |      |                  |          |     |      |                |      |     |               |                            |                      |
|                  |        |                       |                             | PROCESS        |                      |      |                  |          |     |      |                |      |     |               |                            |                      |



# OPERATION FILE

| NAME <u>J Carter</u> ALC <u>OC</u> DATE <u>5/5/89</u> RCC <u>MATPCA</u> SHEET <u>3</u> OF <u>4</u> |         | WCD <u>CAEY08</u> WCD DATE <u>88307</u> |                             |                |                        |                  |      |   |           |                |      |                               |                      |
|--|---------|---|-----------------------------|----------------|------------------------|------------------|------|---|-----------|----------------|------|-------------------------------|----------------------|
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION                   | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS % | MANPOWER         |      |   | EQUIPMENT |                |      | TIME REQUIRED HRS.            | DATA SOURCE COMMENTS |
|  |         |   |                             |                |                        | SKILL CODE/LEVEL | QTY. | % | HRS.      | EQUIPMENT CODE | QTY. |                               |                      |
| 060  | MAT PCA | REPAIR                                  | 1.0                         | TRANSIT        | —                      | —                | —    | — | —         | —              | —    | —                             |                      |
|  |         | SETUP                                   | —                           | —              | —                      | —                | —    | — | —         | —              | —    | NOTE:<br>OVEN BAKE<br>AT U-43 |                      |
|  |         | PROCESS                                 | —                           | —              | —                      | —                | —    | — | —         | —              | —    |                               |                      |
| 070  | RE ASS  | RE ASS                                  | 1.0                         | TRANSIT        | 1.0                    | 2                | —    | — | —         | —              | —    | —                             |                      |
|  |         | SETUP                                   | —                           | —              | —                      | —                | —    | — | —         | —              | —    | NOTE:<br>OVEN BAKE<br>AT U-43 |                      |
|  |         | PROCESS                                 | —                           | —              | —                      | —                | —    | — | —         | —              | —    |                               |                      |
| 080  | TEST    | TEST                                    | 1.0                         | TRANSIT        | —                      | —                | —    | — | —         | —              | —    | —                             |                      |
|  |         | SETUP                                   | —                           | —              | —                      | —                | —    | — | —         | —              | —    | NOTE:<br>OVEN BAKE<br>AT U-43 |                      |
|  |         | PROCESS                                 | —                           | —              | —                      | —                | —    | — | —         | —              | —    |                               |                      |
| 090  | TEST    | TEST                                    | 1.0                         | TRANSIT        | —                      | —                | —    | — | —         | —              | —    | —                             |                      |
|  |         | SETUP                                   | —                           | —              | —                      | —                | —    | — | —         | —              | —    | NOTE:<br>OVEN BAKE<br>AT U-43 |                      |
|  |         | PROCESS                                 | —                           | —              | —                      | —                | —    | — | —         | —              | —    |                               |                      |
| 100  | TEST    | TEST                                    | 1.0                         | TRANSIT        | —                      | —                | —    | — | —         | —              | —    | —                             |                      |
|  |         | SETUP                                   | —                           | —              | —                      | —                | —    | — | —         | —              | —    | NOTE:<br>OVEN BAKE<br>AT U-43 |                      |
|  |         | PROCESS                                 | —                           | —              | —                      | —                | —    | — | —         | —              | —    |                               |                      |



# OPERATION FILE

| NAME <u>J. Carter</u> ALC <u>OC</u> DATE <u>5/5/83</u> ROC <u>MAT PCA</u> SHEET <u>4</u> OF <u>4</u> |         | WCD <u>CAEY08</u> WCD DATE <u>88302</u> |                             |                |                      |                  |      |                 |                    |                |      |                 |                    |                      |
|--|---------|---|-----------------------------|----------------|----------------------|------------------|------|-----------------|--------------------|----------------|------|-----------------|--------------------|----------------------|
| PCN  | IRN     | PCN                                     | IRN                         |                |                      |                  |      |                 |                    |                |      |                 |                    |                      |
| 34128 A  |         |   |                             |                |                      |                  |      |                 |                    |                |      |                 |                    |                      |
| OPERATION NUMBER   | ROC     | OPERATION DESCRIPTION                   | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS | SKILL CODE/LEVEL | QTY. | TIME REQUIRED % | TIME REQUIRED HRS. | EQUIPMENT CODE | QTY. | TIME REQUIRED % | TIME REQUIRED HRS. | DATA SOURCE COMMENTS |
| 110  | MAT PCA | PROC                                    | 1.0                         | TRANSIT        | —                    | —                | —    | —               | —                  | —              | —    | —               | —                  | SAFETY WIRE          |
|  |         |   |                             | SETUP          | —                    | —                | —    | —               | —                  | —              | —    | —               | —                  |                      |
|  |         |   |                             | PROCESS        | —                    | —                | —    | —               | —                  | —              | —    | —               | —                  |                      |
| 120  |         | PW                                      | 1.0                         | TRANSIT        | —                    | —                | —    | —               | —                  | —              | —    | —               |                    |                      |
|  |         |   |                             | SETUP          | —                    | —                | —    | —               | —                  | —              | —    | —               |                    | —                    |
|  |         |   |                             | PROCESS        | —                    | —                | —    | —               | —                  | —              | —    | —               |                    | —                    |
| 125  |         | PW                                      | 1.0                         | TRANSIT        | —                    | —                | —    | —               | —                  | —              | —    | —               |                    |                      |
|  |         |   |                             | SETUP          | —                    | —                | —    | —               | —                  | —              | —    | —               |                    | —                    |
|  |         |   |                             | PROCESS        | —                    | —                | —    | —               | —                  | —              | —    | —               |                    | —                    |
| 130  |         | PW                                      | 1.0                         | TRANSIT        | —                    | —                | —    | —               | —                  | —              | —    | —               |                    |                      |
|  |         |   |                             | SETUP          | —                    | —                | —    | —               | —                  | —              | —    | —               |                    | —                    |
|  |         |   |                             | PROCESS        | —                    | —                | —    | —               | —                  | —              | —    | —               |                    | —                    |
| 145  |         | PW                                      | 1.0                         | TRANSIT        | —                    | —                | —    | —               | —                  | —              | —    | —               |                    |                      |
|  |         |   |                             | SETUP          | —                    | —                | —    | —               | —                  | —              | —    | —               |                    | —                    |
|  |         |   |                             | PROCESS        | —                    | —                | —    | —               | —                  | —              | —    | —               |                    | —                    |
| 9999   |         | OUT                                     | 1.0                         |                |                      |                  |      |                 |                    |                |      |                 |                    |                      |



F U 4

DATE 5-5-82

**PREPARED BY**

[illegible]

**LSC-20147**



| NAME <u>Chen, Guo-Qing</u> ALC <u>W.C.</u> DATE <u>5-20-89</u> RCC <u>MAT/PCB</u> SHEET <u>1</u> OF <u>4</u> |         |                       |                              |                |                                     |                  |                              |  |                      |
|--|---------|-----------------------|------------------------------|----------------|-------------------------------------|------------------|------------------------------|--|----------------------|
| WCD <u>CHCQ02</u> WCD DATE <u>89010</u>  |         |                       |                              |                |                                     |                  |                              |  |                      |
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION | LABORATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW INHOURS<br>% INHOURS | SKILL CODE/LEVEL | MAIN POWER<br>QTY. % INHOURS | EQUIPMENT<br>EQUIPMENT CODE QTY. % INHOURS | DATA SOURCE COMMENTS |
| 00   | MAT RA  | IN                    | 1.0                          | TRANSIT        | 1.0 20.0                            |                  |                              |  |                      |
|  |         |                       |                              | SETUP          |                                     |                  |                              |  |                      |
|  |         |                       |                              | PROCESS        |                                     |                  |                              |  |                      |
| 010  | MAT PCB | WPC                   | 1.0                          | TRANSIT        |                                     |                  |                              |  |                      |
|  |         |                       |                              | SETUP          |                                     |                  |                              |  |                      |
|  |         |                       |                              | PROCESS        |                                     |                  |                              |  |                      |
| 050  |         | WES                   | 1.0                          | TRANSIT        |                                     |                  |                              |  |                      |
|  |         |                       |                              | SETUP          |                                     |                  |                              |  |                      |
|  |         |                       |                              | PROCESS        |                                     |                  |                              |  |                      |
| 060  |         | CLN                   | 1.0                          | TRANSIT        |                                     |                  |                              |  |                      |
|  |         |                       |                              | SETUP          |                                     |                  |                              |  |                      |
|  |         |                       |                              | PROCESS        |                                     |                  |                              |  |                      |
| 070  |         | INSP                  | 1.0                          | TRANSIT        |                                     |                  |                              |  |                      |
|  |         |                       |                              | SETUP          |                                     |                  |                              |  |                      |
|  |         |                       |                              | PROCESS        |                                     |                  |                              |  |                      |



[illegible]



# OPERATION PROFILE

| NAME <u>Om Gurdary</u> ALC <u>CC</u> DATE <u>5-22-59</u> RCC <u>124TPCH</u> SHEET <u>3</u> OF <u>4</u> |             | WCD <u>01/10/59</u> WCD DATE <u>89010</u> |                             |                |                                |                  |      |                         |                |      |                         |                               |  |  |  |  |
|--|-------------|---|-----------------------------|----------------|--------------------------------|------------------|------|-------------------------|----------------|------|-------------------------|-------------------------------|--|--|--|--|
| OPERATION NUMBER   | RCC         | OPERATION DESCRIPTION                     | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS<br>% INH. | SKILL CODE/LEVEL | QTY. | TIME REQUIRED<br>% INH. | EQUIPMENT CODE | QTY. | TIME REQUIRED<br>% INH. | DATA SOURCE COMMENTS          |  |  |  |  |
| 122  | MIAT<br>PCA | PROC                                      | 1.0                         | TRANSIT        | 1.0                            | BYD9             | 1    | -                       |                | 1    | 1.0                     | Buko 1.0 Hm.<br>+<br>Cold .25 |  |  |  |  |
|  |             |   |                             | SETUP          |                                |                  |      |                         |                |      |                         |                               |  |  |  |  |
|  |             |   |                             | PROCESS        |                                |                  |      |                         |                |      |                         |                               |  |  |  |  |
| 123  | /           | PROP                                      | 1.0                         | TRANSIT        | 1.0                            | BYD9             | 1    | -                       | BEN3           | 1    | 1.0                     | Skill 8-10                    |  |  |  |  |
|  |             |   |                             | SETUP          |                                |                  |      |                         |                |      |                         |                               |  |  |  |  |
|  |             |   |                             | PROCESS        |                                |                  |      |                         |                |      |                         |                               |  |  |  |  |
| 124  | /           | TEST                                      | 1.0                         | TRANSIT        | 1.0                            | BYD9             | 1    | -                       | BEN3           | 1    | 1.0                     | Skill 8-10                    |  |  |  |  |
|  |             |   |                             | SETUP          |                                |                  |      |                         |                |      |                         |                               |  |  |  |  |
|  |             |   |                             | PROCESS        |                                |                  |      |                         |                |      |                         |                               |  |  |  |  |
| 170  | /           | PW  | 1.0                         | TRANSIT        | 1.0                            | BYD9             | 1    | -                       | BEN3           | 1    | 1.0                     | Skill 8-10                    |  |  |  |  |
|  |             |   |                             | SETUP          |                                |                  |      |                         |                |      |                         |                               |  |  |  |  |
|  |             |   |                             | PROCESS        |                                |                  |      |                         |                |      |                         |                               |  |  |  |  |
| 171  | /           | PROC                                      | 1.0                         | TRANSIT        | 1.0                            | BYD9             | 1    | -                       | BEN3           | 1    | 1.0                     | Skill 8-10                    |  |  |  |  |
|  |             |   |                             | SETUP          |                                |                  |      |                         |                |      |                         |                               |  |  |  |  |
|  |             |   |                             | PROCESS        |                                |                  |      |                         |                |      |                         |                               |  |  |  |  |
| 172  | /           | PROC                                      | 1.0                         | TRANSIT        | 1.0                            | BYD9             | 1    | -                       | BEN3           | 1    | 1.0                     | Skill 8-10                    |  |  |  |  |
|  |             |   |                             | SETUP          |                                |                  |      |                         |                |      |                         |                               |  |  |  |  |
|  |             |   |                             | PROCESS        |                                |                  |      |                         |                |      |                         |                               |  |  |  |  |



| NAME          |     | DATE        |     | RCC           |     | SHEET 4 OF 4 |     |
|---------------|-----|-------------|-----|---------------|-----|--------------|-----|
| PCN           |     | WCD         |     | WCD DATE      |     | 89012        |     |
| HSH           |     | MANDATORY   |     | TIME REQUIRED |     | EQUIPMENT    |     |
| PHI           |     | FLOW HOURS  |     | % HRS.        |     | QTY. HRS.    |     |
| OPERATION     |     | OPERATION   |     | MANDATORY     |     | EQUIPMENT    |     |
| NUMBER        |     | DESCRIPTION |     | OCCURRENCE    |     | CODE         |     |
| RCC           |     | TYPE        |     | FACTOR        |     | QTY. HRS.    |     |
| TIME REQUIRED |     | FLOW HOURS  |     | OCCURRENCE    |     | EQUIPMENT    |     |
| % HRS.        |     | TYPE        |     | FACTOR        |     | QTY. HRS.    |     |
| 172           | WHT | TRANSIT     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | SETUP       | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | PROCESS     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | TRANSIT     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | SETUP       | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | PROCESS     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | TRANSIT     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | SETUP       | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | PROCESS     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | TRANSIT     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | SETUP       | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | PROCESS     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | TRANSIT     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | SETUP       | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | PROCESS     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | TRANSIT     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | SETUP       | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | PROCESS     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | TRANSIT     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | SETUP       | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | PROCESS     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | TRANSIT     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | SETUP       | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | PROCESS     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | TRANSIT     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | SETUP       | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | PROCESS     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | TRANSIT     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | SETUP       | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | PROCESS     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | TRANSIT     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | SETUP       | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | PROCESS     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | TRANSIT     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | SETUP       | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | PROCESS     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | TRANSIT     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | SETUP       | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | PROCESS     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | TRANSIT     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | SETUP       | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | PROCESS     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | TRANSIT     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | SETUP       | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | PROCESS     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | TRANSIT     | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |
| 180           | PCN | SETUP       | 1.0 | 1.0           | 2.0 | 1.0          | 1.0 |







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SHEET 1 OF 44

WCD DATE 89010

EX-119-12



# OPERATION PROFILE

| NAME <u>GM Guiding ALC</u> <u>DC</u> DATE <u>5/17/89</u> RCC <u>MATRA</u> SHEET <u>2</u> OF <u>4</u> |     |                       |                             |                |                                 |                  |      |                          |                |      |                          |                      |
|--|-----|-----------------------|-----------------------------|----------------|---------------------------------|------------------|------|--------------------------|----------------|------|--------------------------|----------------------|
| PCN <u>342538</u> WCD <u>CHRC2H</u> WCD DATE <u>89010</u>  |     |                       |                             |                |                                 |                  |      |                          |                |      |                          |                      |
| OPERATION NUMBER   | RCC | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS<br>% INRS. | SKILL CODE/LEVEL | QTY. | TIME REQUIRED<br>% INRS. | EQUIPMENT CODE | QTY. | TIME REQUIRED<br>% INRS. | DATA SOURCE COMMENTS |
| 050  | MAT | hwb                   | 1.0                         | TRANSIT        |                                 |                  |      |                          |                |      |                          |                      |
|  |     |                       |                             | SETUP          |                                 |                  |      |                          |                |      |                          |                      |
|  |     |                       |                             | PROCESS        |                                 |                  |      |                          |                |      |                          |                      |
| 060  | /   | HSSY                  | 1.0                         | TRANSIT        |                                 |                  |      |                          |                |      |                          |                      |
|  |     |                       |                             | SETUP          |                                 |                  |      |                          |                |      |                          |                      |
|  |     |                       |                             | PROCESS        |                                 |                  |      |                          |                |      |                          |                      |
| 070  | /   | TEST                  | 1.0                         | TRANSIT        |                                 |                  |      |                          |                |      |                          |                      |
|  |     |                       |                             | SETUP          |                                 |                  |      |                          |                |      |                          |                      |
|  |     |                       |                             | PROCESS        |                                 |                  |      |                          |                |      |                          |                      |
| 080  | /   | RFA                   | 1.0                         | TRANSIT        |                                 |                  |      |                          |                |      |                          |                      |
|  |     |                       |                             | SETUP          |                                 |                  |      |                          |                |      |                          |                      |
|  |     |                       |                             | PROCESS        |                                 |                  |      |                          |                |      |                          |                      |
| 081  | /   | PROC                  | 1.0                         | TRANSIT        |                                 |                  |      |                          |                |      |                          |                      |
|  |     |                       |                             | SETUP          |                                 |                  |      |                          |                |      |                          |                      |
|  |     |                       |                             | PROCESS        |                                 |                  |      |                          |                |      |                          |                      |



2

SHEET 3 OF 11

1

1



[illegible]







# OPERATION FILE

|                    |  |                   |  |                       |  |                    |  |                              |  |
|--------------------|--|-------------------|--|-----------------------|--|--------------------|--|------------------------------|--|
| NAME <u>Parker</u> |  | ALC <u>OC</u>     |  | DATE <u>5/19/85</u>   |  | RCC <u>MAT-PCA</u> |  | SHEET <u>  </u> OF <u>  </u> |  |
| PCN <u>ASH</u>     |  | WCD <u>CAE209</u> |  | WCD DATE <u>88161</u> |  |                    |  |                              |  |
| PIN <u>34551A</u>  |  |                   |  |                       |  |                    |  |                              |  |

| OPERATION NUMBER | RCC | OPERATION DESCRIPTION | VALIDATION OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW % | MANDATORY FLOW HOURS | MANPOWER         |      |   | EQUIPMENT |                |      | TIME REQUIRED |      | DATA SOURCE COMMENTS |  |
|------------------|-----|-----------------------|------------------------------|----------------|------------------|----------------------|------------------|------|---|-----------|----------------|------|---------------|------|----------------------|--|
|                  |     |                       |                              |                |                  |                      | SKILL CODE/LEVEL | QTY. | % | HRS.      | EQUIPMENT CODE | QTY. | %             | HRS. |                      |  |
| 00               | MAT | IN                    | 1.0                          | TRANSIT        |                  |                      |                  |      |   |           |                |      |               |      |                      |  |
|                  |     |                       |                              | SETUP          |                  |                      |                  |      |   |           |                |      |               |      |                      |  |
|                  |     |                       |                              | PROCESS        |                  |                      |                  |      |   |           |                |      |               |      |                      |  |
|                  |     |                       |                              | TRANSIT        |                  |                      |                  |      |   |           |                |      |               |      |                      |  |
|                  |     |                       |                              | SETUP          |                  |                      |                  |      |   |           |                |      |               |      |                      |  |
|                  |     |                       |                              | PROCESS        |                  |                      |                  |      |   |           |                |      |               |      |                      |  |
|                  |     |                       |                              | TRANSIT        |                  |                      |                  |      |   |           |                |      |               |      |                      |  |
|                  |     |                       |                              | SETUP          |                  |                      |                  |      |   |           |                |      |               |      |                      |  |
|                  |     |                       |                              | PROCESS        |                  |                      |                  |      |   |           |                |      |               |      |                      |  |
|                  |     |                       |                              | TRANSIT        |                  |                      |                  |      |   |           |                |      |               |      |                      |  |
|                  |     |                       |                              | SETUP          |                  |                      |                  |      |   |           |                |      |               |      |                      |  |
|                  |     |                       |                              | PROCESS        |                  |                      |                  |      |   |           |                |      |               |      |                      |  |
|                  |     |                       |                              | TRANSIT        |                  |                      |                  |      |   |           |                |      |               |      |                      |  |
|                  |     |                       |                              | SETUP          |                  |                      |                  |      |   |           |                |      |               |      |                      |  |
|                  |     |                       |                              | PROCESS        |                  |                      |                  |      |   |           |                |      |               |      |                      |  |
|                  |     |                       |                              | TRANSIT        |                  |                      |                  |      |   |           |                |      |               |      |                      |  |
|                  |     |                       |                              | SETUP          |                  |                      |                  |      |   |           |                |      |               |      |                      |  |
|                  |     |                       |                              | PROCESS        |                  |                      |                  |      |   |           |                |      |               |      |                      |  |

Note - This sheet for IN ~~DATA~~ DATA



# OPERATION IOFILE

| NAME <u>PARKER</u> ALC <u>OC</u> DATE <u>5/15/89</u> RCC <u>NATPCA</u> SHEET <u>1</u> OF <u>3</u> |        | WCD <u>CAE304</u> WCD DATE <u>88151</u> |                             |                |                      |          |                  |               |               |  |
|---|--------|---|-----------------------------|----------------|----------------------|----------|------------------|---------------|---------------|--|
| OPERATION NUMBER  | RCC    | OPERATION DESCRIPTION                   | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS | MANPOWER | EQUIPMENT        | TIME REQUIRED | TIME REQUIRED | DATA SOURCE COMMENTS                           |
|   |        |   |                             |                | %                    | QTY.     | SKILL CODE/LEVEL | %             | HRS.          |  |
| 010   | MAT RA | REC                                     | 1.0                         | THANISIT       | -                    | 1        | BY 10            | 1.0           | 1.0           | SK 11 5-10                                     |
| 015   |        | INFO                                    | 1.0                         | SETUP          | -                    | 1        |                  | -             | -             |  |
| 020   |        | DIS                                     | 1.0                         | PROCESS        | 1                    | 1        |                  | 1.0           | 1.0           | SK 11 5-10                                     |
| 030   |        | CLN                                     | 1.0                         | THANISIT       | -                    | 1        |                  | -             | -             | Free on Turn                                   |
| 040   |        | INSP                                    | 1.0                         | PROCESS        | 1                    | 1        |                  | 1.0           | 1.0           | SK 11 5-10                                     |
|   |        |   |                             | THANISIT       | -                    | 1        |                  | -             | -             | Visuc 1-<br>dangos! ex. ing or<br>in 100% plus |
|   |        |   |                             | SETUP          | -                    | 1        |                  | -             | -             | SK 11 5-10                                     |
|   |        |   |                             | PROCESS        | 1                    | 1        |                  | 1.0           | 1.0           | SK 11 5-10                                     |



# OPERATION PROFILE

NAME Arker ALC OS DATE 5/15/89 RCC MATPCA SHEET 3 OF 3

| WCD 34551A       |            |                       |                             |                |                      |      |                  |      |     |           |                |      |                      | WCD DATE 8/16/1 |  |  |  |
|------------------|------------|-----------------------|-----------------------------|----------------|----------------------|------|------------------|------|-----|-----------|----------------|------|----------------------|-----------------|--|--|--|
| OPERATION NUMBER | RCC        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |      | MANPOWER         |      |     | EQUIPMENT |                |      | DATA SOURCE COMMENTS |                 |  |  |  |
|                  |            |                       |                             |                | %                    | HRS. | SKILL CODE/LEVEL | QTY. | %   | HRS.      | EQUIPMENT CODE | QTY. |                      | %               | HRS.   |  |  |
| 065              | MAT<br>PCA | TEST                  | 1.0                         | PROCESS        | -                    | -    | BY 10            | 1    | 1.0 | .33       | BEN 4          | 1    | 1.0                  | .33             | SKILL 9-10   |  |  |
|                  |            |                       |                             | PROCESS        | -                    | -    |                  |      |     |           |                |      |                      |                 |  |  |  |
| 090              |            | ASSY                  | 1.0                         | PROCESS        | -                    | -    |                  | 1    | 1.0 | .25       | BEN 4          | 1    | 1.0                  | .25             | SKILL 9-10   |  |  |
|                  |            |                       |                             | PROCESS        | -                    | -    |                  |      |     |           |                |      |                      |                 |  |  |  |
| 110              |            | ASSY                  | 1.0                         | PROCESS        | -                    | -    |                  | 1    | 1.0 | .50       | BEN 4          | 1    | 1.0                  | .50             | SKILL 9-10   |  |  |
|                  |            |                       |                             | PROCESS        | -                    | -    |                  |      |     |           |                |      |                      |                 |  |  |  |
| 155              |            | TEST                  | 1.0                         | PROCESS        | 1.0                  | 12.0 |                  | -    | -   | -         | -              | -    | -                    | -               | sent to 3108 they do the work with their personnel |  |  |
|                  |            |                       |                             | PROCESS        | 1.0                  | 12.0 |                  |      |     |           |                |      |                      |                 |  |  |  |
| 178              |            | TEST                  | 1.0                         | PROCESS        | -                    | -    | BY 10            | 1    | 1.0 | .33       | BEN 4          | 1    | 1.0                  | .33             | SKILL 9-10   |  |  |
|                  |            |                       |                             | PROCESS        | -                    | -    |                  |      |     |           |                |      |                      |                 |  |  |  |



# OPERATION PROFILE

| NAME <u>Parker</u>  |           | ALC <u>OC</u>            |                                   | DATE <u>5/15/89</u> |                         | RCC <u>MATRA</u>     |      | SHEET <u>3</u> OF <u>3</u> |       |      |                    |       |  |                         |  |
|---------------------|-----------|--------------------------|-----------------------------------|---------------------|-------------------------|----------------------|------|----------------------------|-------|------|--------------------|-------|--|-------------------------|--|
| PCH<br>NSH<br>PMI   |           | 34551A                   |                                   | WCD <u>CAE 204</u>  |                         | WCD DATE <u>8861</u> |      |                            |       |      |                    |       |  |                         |  |
| OPERATION<br>NUMBER | RCC       | OPERATION<br>DESCRIPTION | MANDATORY<br>OCCURRENCE<br>FACTOR | OPERATION<br>TYPE   | MANDATORY<br>FLOW HOURS |                      |      | MANPOWER                   |       |      | EQUIPMENT          |       |  | DATA SOURCE<br>COMMENTS |  |
|                     |           |                          |                                   |                     | %                       | HIRS.                | QTY. | TIME REQUIRED<br>%         | HIRS. | QTY. | TIME REQUIRED<br>% | HIRS. |  |                         |  |
| 239                 | MAT<br>RA | PW                       | 1.0                               | TRANSIT             |                         |                      |      |                            |       |      |                    |       |  |                         |  |
|                     |           |                          |                                   | SETUP               |                         |                      |      |                            |       |      |                    |       |  |                         |  |
|                     |           |                          |                                   | PROCESS             |                         |                      |      |                            |       |      |                    |       |  |                         |  |
| 9999                | }         | OUT                      | 1.0                               | TRANSIT             |                         |                      |      |                            |       |      |                    |       |  |                         |  |
|                     |           |                          |                                   | SETUP               |                         |                      |      |                            |       |      |                    |       |  |                         |  |
|                     |           |                          |                                   | PROCESS             |                         |                      |      |                            |       |      |                    |       |  |                         |  |
|                     |           |                          |                                   | TRANSIT             |                         |                      |      |                            |       |      |                    |       |  |                         |  |
|                     |           |                          |                                   | SETUP               |                         |                      |      |                            |       |      |                    |       |  |                         |  |
|                     |           |                          |                                   | PROCESS             |                         |                      |      |                            |       |      |                    |       |  |                         |  |
|                     |           |                          |                                   | TRANSIT             |                         |                      |      |                            |       |      |                    |       |  |                         |  |
|                     |           |                          |                                   | SETUP               |                         |                      |      |                            |       |      |                    |       |  |                         |  |
|                     |           |                          |                                   | PROCESS             |                         |                      |      |                            |       |      |                    |       |  |                         |  |
|                     |           |                          |                                   | TRANSIT             |                         |                      |      |                            |       |      |                    |       |  |                         |  |
|                     |           |                          |                                   | SETUP               |                         |                      |      |                            |       |      |                    |       |  |                         |  |
|                     |           |                          |                                   | PROCESS             |                         |                      |      |                            |       |      |                    |       |  |                         |  |
|                     |           |                          |                                   | TRANSIT             |                         |                      |      |                            |       |      |                    |       |  |                         |  |
|                     |           |                          |                                   | SETUP               |                         |                      |      |                            |       |      |                    |       |  |                         |  |
|                     |           |                          |                                   | PROCESS             |                         |                      |      |                            |       |      |                    |       |  |                         |  |

SKILL F-10







# OPERATION PROFILE

| NAME <u>J. CARTER</u> ALC <u>OC</u> DATE <u>5-4-89</u> RCC <u>MIAT PCA</u> SHEET <u>1</u> OF <u>6</u> |            |                       |                             |                |                        |                   |      |                 |      |      |                      |                 |      |
|---|------------|-----------------------|-----------------------------|----------------|------------------------|-------------------|------|-----------------|------|------|----------------------|-----------------|------|
| MSN <u>350234</u> WCD <u>CAEY10</u> WCD DATE <u>89094</u>   |            |                       |                             |                |                        |                   |      |                 |      |      |                      |                 |      |
| OPERATION NUMBER  | RCC        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANPOWER               |                   |      | EQUIPMENT       |      |      | DATA SOURCE COMMENTS |                 |      |
|   |            |                       |                             |                | MANDATORY FLOW HOURS % | SKILL CODE/ LEVEL | QTY. | TIME REQUIRED % | HRS. | QTY. |                      | TIME REQUIRED % | HRS. |
| 00  | MAT<br>PCA | IN                    | 1.0                         | TRANSIT        |                        |                   |      |                 |      |      |                      |                 |      |
|   |            |                       |                             | SETUP          |                        |                   |      |                 |      |      |                      |                 |      |
|   |            |                       |                             | PROCESS        | 1.0                    | 24.0              |      |                 |      |      |                      |                 |      |
| 010   | MAT<br>PCA | REC                   | 1.0                         | TRANSIT        |                        | AY<br>1.0         |      |                 |      |      |                      |                 |      |
|   |            |                       |                             | SETUP          |                        |                   |      |                 |      |      |                      |                 |      |
|   |            |                       |                             | PROCESS        |                        |                   | 1.0  | 1.0             | .10  | 1    | 1.0                  | .10             |      |
| 015   | MAT<br>PCA | PW                    | 1.0                         | TRANSIT        |                        |                   |      |                 |      |      |                      |                 |      |
|   |            |                       |                             | SETUP          |                        |                   |      |                 |      |      |                      |                 |      |
|   |            |                       |                             | PROCESS        |                        |                   |      | 1.0             | .10  | 1    | 1.0                  | .10             |      |
| 020   |            | TEST                  | 1.0                         | TRANSIT        |                        |                   |      |                 |      |      |                      |                 |      |
|   |            |                       |                             | SETUP          |                        |                   |      |                 |      |      |                      |                 |      |
|   |            |                       |                             | PROCESS        |                        |                   |      | 1.0             | .10  | 1    | 1.0                  | .10             |      |
| 030   |            | TEST                  | 1.0                         | TRANSIT        |                        |                   |      |                 |      |      |                      |                 |      |
|   |            |                       |                             | SETUP          |                        |                   |      |                 |      |      |                      |                 |      |
|   |            |                       |                             | PROCESS        |                        |                   |      | 1.0             | .10  | 1    | 1.0                  | .10             |      |



# OPERATION PROFILE

| NAME _____          |            | ALC _____                |                                   | DATE _____        |                         | RCC _____ |                         | SHEET 2 OF 6 |               |                         |                   |      |               |      |  |
|---------------------|------------|--------------------------|-----------------------------------|-------------------|-------------------------|-----------|-------------------------|--------------|---------------|-------------------------|-------------------|------|---------------|------|--|
| PCN<br>NSN<br>PIN   |            | WCD                      |                                   | WCD DATE          |                         | MANPOWER  |                         | EQUIPMENT    |               | DATA SOURCE<br>COMMENTS |                   |      |               |      |  |
| OPERATION<br>NUMBER | RCC        | OPERATION<br>DESCRIPTION | MANDATORY<br>OCCURRENCE<br>FACTOR | OPERATION<br>TYPE | MANDATORY<br>FLOW HOURS |           | SKILL<br>CODE/<br>LEVEL | QTY.         | TIME REQUIRED |                         | EQUIPMENT<br>CODE | QTY. | TIME REQUIRED |      |  |
|                     |            |                          |                                   |                   | %                       | HRS.      |                         |              | %             | HRS.                    |                   |      | %             | HRS. |  |
|                     |            |                          |                                   | TRANSIT           |                         |           |                         |              |               |                         |                   |      |               |      |  |
|                     |            |                          |                                   | SETUP             |                         |           |                         |              |               |                         |                   |      |               |      |  |
|                     |            |                          |                                   | PROCESS           |                         |           |                         |              |               |                         |                   |      |               |      |  |
| 080                 | MAT<br>MCH | PROD                     | 1.0                               | TRANSIT           |                         |           |                         |              |               |                         |                   |      |               |      |  |
|                     |            |                          |                                   | SETUP             |                         |           |                         |              |               |                         |                   |      |               |      |  |
|                     |            |                          |                                   | PROCESS           |                         |           |                         |              |               |                         |                   |      |               |      |  |
| 085                 | MAT<br>PLA | DISASS                   | 1.0                               | TRANSIT           |                         |           |                         |              |               |                         |                   |      |               |      |  |
|                     |            |                          |                                   | SETUP             |                         |           |                         |              |               |                         |                   |      |               |      |  |
|                     |            |                          |                                   | PROCESS           |                         |           |                         |              |               |                         |                   |      |               |      |  |
| 090                 | MAT<br>PLA | CLEAN                    | 1.0                               | TRANSIT           |                         |           |                         |              |               |                         |                   |      |               |      |  |
|                     |            |                          |                                   | SETUP             |                         |           |                         |              |               |                         |                   |      |               |      |  |
|                     |            |                          |                                   | PROCESS           |                         |           |                         |              |               |                         |                   |      |               |      |  |
| 100                 |            | INSPECT                  | 1.0                               | TRANSIT           |                         |           |                         |              |               |                         |                   |      |               |      |  |
|                     |            |                          |                                   | SETUP             |                         |           |                         |              |               |                         |                   |      |               |      |  |
|                     |            |                          |                                   | PROCESS           |                         |           |                         |              |               |                         |                   |      |               |      |  |



# OPERATION PROFILE

| NAME <u>J. CARTER</u> |            | ALC _____             |                             | DATE _____     |                      | RCC _____ |                  | SHEET <u>3</u> OF <u>6</u> |               |                      |            |               |      |
|-----------------------|------------|-----------------------|-----------------------------|----------------|----------------------|-----------|------------------|----------------------------|---------------|----------------------|------------|---------------|------|
| PCN<br>NSN<br>PIN     |            | WCD                   |                             | WCD DATE       |                      | MANPOWER  |                  | EQUIPMENT                  |               | DATA SOURCE COMMENTS |            |               |      |
| OPERATION NUMBER      | RCC        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |           | SKILL CODE/LEVEL | QTY.                       | TIME REQUIRED |                      | QTY.       | TIME REQUIRED |      |
|                       |            |                       |                             |                | %                    | HRS.      |                  |                            | %             | HRS.                 |            | %             | HRS. |
| 110                   | MAT<br>PIW | WLD                   | 1.0                         | TRANSIT        |                      |           | AY<br>10         |                            |               |                      |            |               |      |
|                       |            |                       |                             | SETUP          |                      |           |                  |                            |               |                      |            |               |      |
|                       |            |                       |                             | PROCESS        | 1.0                  | 24        |                  |                            |               |                      |            |               |      |
| 130                   | MAT<br>PCA | TEST                  | 1.0                         | TRANSIT        |                      |           |                  |                            |               |                      |            |               |      |
|                       |            |                       |                             | SETUP          |                      |           |                  |                            |               |                      |            |               |      |
|                       |            |                       |                             | PROCESS        |                      |           |                  | 1                          | 1.0           | .05                  | OC<br>3953 | 1             | 1.0  |
| 140                   |            | TEST                  | 1.0                         | TRANSIT        |                      |           |                  |                            |               |                      |            |               |      |
|                       |            |                       |                             | SETUP          |                      |           |                  |                            |               |                      |            |               |      |
|                       |            |                       |                             | PROCESS        |                      |           |                  | 1                          | 1.0           | .05                  | OC<br>4523 | 1             | 1.0  |
| 150                   |            | TEST                  | 1.0                         | TRANSIT        |                      |           |                  |                            |               |                      |            |               |      |
|                       |            |                       |                             | SETUP          |                      |           |                  |                            |               |                      |            |               |      |
|                       |            |                       |                             | PROCESS        |                      |           |                  | 1                          | 1.0           | .05                  | OC<br>4523 | 1             | 1.0  |
| 160                   |            | TEST                  | 1.0                         | TRANSIT        |                      |           |                  |                            |               |                      |            |               |      |
|                       |            |                       |                             | SETUP          |                      |           |                  |                            |               |                      |            |               |      |
|                       |            |                       |                             | PROCESS        |                      |           |                  | 1.0                        | 1.0           | .05                  | OC<br>3953 | 1             | 1.0  |



# OPERATION PROFILE

| NAME _____       |            | ALC _____             |                             | DATE _____     |                        | RCC _____         |          | SHEET 4 OF 6   |                |      |                 |                    |                                |
|------------------|------------|-----------------------|-----------------------------|----------------|------------------------|-------------------|----------|----------------|----------------|------|-----------------|--------------------|--------------------------------|
| PCN _____        |            | NSN _____             |                             | PN _____       |                        | WCD _____         |          | WCD DATE _____ |                |      |                 |                    |                                |
| OPERATION NUMBER | RCC        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS % | SKILL CODE/ LEVEL | MANPOWER |                | EQUIPMENT      |      | TIME REQUIRED % | TIME REQUIRED HRS. | DATA SOURCE COMMENTS           |
|                  |            |                       |                             |                |                        |                   | QTY.     | HRS.           | EQUIPMENT CODE | QTY. |                 |                    |                                |
| 170              | MAT<br>PCA | TEST                  | 1.0                         | TRANSIT        | —                      | AY-10             | —        | —              | —              | —    | —               | —                  |                                |
|                  |            |                       |                             | SETUP          | —                      |                   | —        | —              | —              | —    | —               |                    |                                |
|                  |            |                       |                             | PROCESS        | —                      |                   | —        | —              | —              | —    | —               |                    |                                |
| 180              |            | TEST                  | 1.0                         | TRANSIT        | —                      |                   | —        | —              | —              | —    | —               | —                  |                                |
|                  |            |                       |                             | SETUP          | —                      |                   | —        | —              | —              | —    | —               |                    |                                |
|                  |            |                       |                             | PROCESS        | —                      |                   | —        | —              | —              | —    | —               |                    |                                |
| 190              |            | TEST                  | 1.0                         | TRANSIT        | —                      |                   | —        | —              | —              | —    | —               | —                  | COMBINE<br>OP 190, 200<br>4210 |
|                  |            |                       |                             | SETUP          | —                      |                   | —        | —              | —              | —    | —               |                    |                                |
|                  |            |                       |                             | PROCESS        | —                      |                   | —        | —              | —              | —    | —               |                    |                                |
| 220              |            | TEST                  | 1.0                         | TRANSIT        | —                      |                   | —        | —              | —              | —    | —               | —                  |                                |
|                  |            |                       |                             | SETUP          | —                      |                   | —        | —              | —              | —    | —               |                    |                                |
|                  |            |                       |                             | PROCESS        | —                      |                   | —        | —              | —              | —    | —               |                    |                                |
| 230              |            | TEST                  | 1.0                         | TRANSIT        | —                      |                   | —        | —              | —              | —    | —               | —                  |                                |
|                  |            |                       |                             | SETUP          | —                      |                   | —        | —              | —              | —    | —               |                    |                                |
|                  |            |                       |                             | PROCESS        | —                      |                   | —        | —              | —              | —    | —               |                    |                                |



NAME J. CARTER ALC \_\_\_\_\_ DATE \_\_\_\_\_ RCC \_\_\_\_\_ SHEET 5 OF 6

LSC-20X)2C



# OPERATION PROFILE

| NAME <u>W. CARTER</u> ALC _____ |            | DATE _____            |                             | RCC _____      |                                | SHEET <u>6</u> OF <u>6</u> |      |               |      |                      |      |               |      |   |      |   |   |
|---------------------------------|------------|-----------------------|-----------------------------|----------------|--------------------------------|----------------------------|------|---------------|------|----------------------|------|---------------|------|---|------|---|---|
| PCN<br>NSN<br>PIN               |            | WCD                   |                             | WCD DATE       |                                | MANPOWER                   |      | EQUIPMENT     |      | DATA SOURCE COMMENTS |      |               |      |   |      |   |   |
| OPERATION NUMBER                | RCC        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS<br>% HRS. | SKILL CODE/LEVEL           | QTY. | TIME REQUIRED |      | EQUIPMENT CODE       | QTY. | TIME REQUIRED |      |   |      |   |   |
|                                 |            |                       |                             |                |                                |                            |      | %             | HRS. |                      |      | %             | HRS. |   |      |   |   |
| 320                             | MAT<br>PCA | TEST                  | 1.0                         | TRANSIT        | —                              | AY<br>10                   | —    | —             | —    | —                    | —    | —             | —    |   |      |   |   |
|                                 |            |                       |                             | SETUP          | —                              |                            |      |               |      |                      |      |               |      | 2 | BENH | — | — |
|                                 |            |                       |                             | PROCESS        | —                              |                            |      |               |      |                      |      |               |      |   |      |   |   |
| 340                             | MT<br>PIW  | WELD                  | 1.0                         | TRANSIT        | —                              | —                          | —    | —             | —    | —                    | —    | —             | —    |   |      |   |   |
|                                 |            |                       |                             | SETUP          | —                              |                            |      |               |      |                      |      |               |      | — | —    | — | — |
|                                 |            |                       |                             | PROCESS        | 1.0                            |                            |      |               |      |                      |      |               |      |   |      |   |   |
| 350                             | MT<br>PIW  | WELD                  | 1.0                         | TRANSIT        | —                              | —                          | —    | —             | —    | —                    | —    | —             | —    |   |      |   |   |
|                                 |            |                       |                             | SETUP          | —                              |                            |      |               |      |                      |      |               |      | — | —    | — | — |
|                                 |            |                       |                             | PROCESS        | 1.0                            |                            |      |               |      |                      |      |               |      |   |      |   |   |
| 360                             | —          | TEST                  | 1.0                         | TRANSIT        | —                              | —                          | —    | —             | —    | —                    | —    | —             | —    |   |      |   |   |
|                                 |            |                       |                             | SETUP          | —                              |                            |      |               |      |                      |      |               |      | 2 | BENH | — | — |
|                                 |            |                       |                             | PROCESS        | —                              |                            |      |               |      |                      |      |               |      |   |      |   |   |
| 390                             | —          | TEST                  | 1.0                         | TRANSIT        | —                              | —                          | —    | —             | —    | —                    | —    | —             | —    |   |      |   |   |
|                                 |            |                       |                             | SETUP          | —                              |                            |      |               |      |                      |      |               |      | — | —    | — | — |
|                                 |            |                       |                             | PROCESS        | —                              |                            |      |               |      |                      |      |               |      |   |      |   |   |
| 9999                            | —          | OUT                   | 1.0                         | Process        | 1.0                            | 480                        | —    | —             | —    | 02<br>4929           | —    | 1.0           | 1.0  |   |      |   |   |



## FLOW PROCESS CHART

SUBJECT 350 23 ADATE 5-4-89

ITEM CODE

PCN

NSN

PIN

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WCD CAEYIOWCD DATE 89094CHART BEGINS OP 010CHART ENDS OP 390PREPARED BY J. CARTER

| OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS | DESCRIPTION | OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS | DESCRIPTION |
|------------------------|----------------|---------|-------------|------------------------|----------------|---------|-------------|
| 010                    | 010            | ●○○□▽   | REC         | 320                    | 320            | ●○○□▽   | TEST        |
| 015                    | 015            | ●○○□▽   | VERIFY      |                        | 330            | ●○○□▽   |             |
| 020                    | 020            | ●○○□▽   | TEST        | 340                    | 340            | ●○○□▽   |             |
| 030                    | 030            | ●○○□▽   | TEST        |                        | 350            | ●○○□▽   |             |
|                        | 040            | ●○○□▽   |             | 360                    | 360            | ●○○□▽   | TEST        |
|                        | 050            | ●○○□▽   |             |                        | 380            | ●○○□▽   |             |
|                        | 060            | ●○○□▽   | TEST        | 390                    | 390            | ●○○□▽   | TEST        |
| 070                    | 070            | ●○○□▽   | DISASS      |                        | 400            | ●○○□▽   |             |
| 080                    | 080            | ●○○□▽   | MACHINE     |                        | 410            | ●○○□▽   |             |
| 090                    | 090            | ●○○□▽   | CLEAN       | 420                    | 420            | ●○○□▽   | PW          |
| 100                    | 100            | ●○○□▽   | INSP        | 460                    | 460            | ●○○□▽   | PW          |
| 110                    | 110            | ●○○□▽   | HELD        | 470                    | 470            | ●○○□▽   | PW          |
| 130                    | 130            | ●○○□▽   | TEST        | 475                    | 475            | ●○○□▽   | PW          |
| 140                    | 140            | ●○○□▽   | TEST        |                        |                | ●○○□▽   |             |
| 150                    | 150            | ●○○□▽   | TEST        |                        |                | ●○○□▽   |             |
| 160                    | 160            | ●○○□▽   | TEST        |                        |                | ●○○□▽   |             |
| 180                    | 180            | ●○○□▽   | TEST        |                        |                | ●○○□▽   |             |
| 190                    | 190            | ●○○□▽   | TEST        |                        |                | ●○○□▽   |             |
|                        | 200            | ●○○□▽   | TEST        |                        |                | ●○○□▽   |             |
|                        | 210            | ●○○□▽   | TEST        |                        |                | ●○○□▽   |             |
| 220                    | 220            | ●○○□▽   | TEST        |                        |                | ●○○□▽   |             |
| 230                    | 230            | ●○○□▽   | TEST        |                        |                | ●○○□▽   |             |
| 240                    | 240            | ●○○□▽   | TEST        |                        |                | ●○○□▽   |             |
|                        | 250            | ●○○□▽   | TEST        |                        |                | ●○○□▽   |             |
|                        | 260            | ●○○□▽   | TEST        |                        |                | ●○○□▽   |             |
|                        | 270            | ●○○□▽   | TEST        |                        |                | ●○○□▽   |             |
| 280                    | 280            | ●○○□▽   | TEST        |                        |                | ●○○□▽   |             |
| 290                    | 290            | ●○○□▽   | TEST        |                        |                | ●○○□▽   |             |
| 300                    | 300            | ●○○□▽   | REPAIR      |                        |                | ●○○□▽   |             |
| 310                    | 310            | ●○○□▽   | REASSEMB    |                        |                | ●○○□▽   |             |
| 320                    | 320            | ●○○□▽   | TEST        |                        |                | ●○○□▽   |             |

○ OPERATION

▽ STORAGE

□ INSPECTION

◇ TRANSPORTATION

D DELAY

\* COMBINE

LSC-20147



# OPERATION PROFILE

NAME Parker ALC OC DATE 5/23/01 RCC MAT/PCA SHEET 1 OF 1

|             |  |               |  |
|-------------|--|---------------|--|
| WCD CAEY 11 |  | WCD DATE 8307 |  |
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Note: This Sheet for IN-OUT DATES



# OPERATION TOFILE

| NAME <u>Parker</u> |         | ALC <u>DC</u>         |                             | DATE <u>5/22/89</u>   |                      | RCC <u>MAT PCA</u>    |      | SHEET <u>1</u> OF <u>2</u> |                    |                |      |                 |                    |  |
|--------------------|---------|-----------------------|-----------------------------|-----------------------|----------------------|-----------------------|------|----------------------------|--------------------|----------------|------|-----------------|--------------------|--|
| WCD <u>CAEY11</u>  |         | WCD DATE <u>58302</u> |                             | WCD DATE <u>58302</u> |                      | WCD DATE <u>58302</u> |      | WCD DATE <u>58302</u>      |                    |                |      |                 |                    |  |
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW HOURS | SKILL CODE/LEVEL      | QTY. | TIME REQUIRED %            | TIME REQUIRED HRS. | EQUIPMENT CODE | QTY. | TIME REQUIRED % | TIME REQUIRED HRS. | DATA SOURCE COMMENTS   |
| 010                | MAT PCA | REC                   | 1.0                         | PROCESS               | -                    | BY10                  | 1    | 1.0                        | .02                |                |      |                 |                    | SKILL 5-10   |
| 015                |         | INFO                  | 1.0                         | PROCESS               | -                    |                       |      |                            |                    |                |      |                 |                    | SKILL 5-10   |
| 020                |         | DIS                   | 1.0                         | PROCESS               | -                    |                       | 1    | 1.0                        | .50                | BEN19          | 1    | 1.0             | .50                | SKILL 5-10<br>Remove cover.                                  |
| 030                |         | CLN                   | 1.0                         | PROCESS               | -                    |                       |      |                            |                    |                |      |                 |                    | SKILL 5-10<br>Topical  |
| 040                |         | INSP                  | 1.0                         | PROCESS               | -                    |                       | 1    | 1.0                        | .25                | BEN19          | 1    | 1.0             | .50                | SKILL 5-10<br>For corrected channel boards, etc.<br>(V.5uc1) |
|                    |         |                       |                             | PROCESS               | -                    |                       | 1    | 1.0                        | .08                | CLN19          | 1    | 1.0             | .08                | SKILL 5-10   |



# OPERATION PROFILE

NAME Parker ALC OC DATE 05/23/89 RCC MATPCA SHEET 2 OF 2

| OPERATION NUMBER | RCC | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |      | MANPOWER |     | TIME REQUIRED |      | EQUIPMENT      |      | DATA SOURCE COMMENTS |
|------------------|-----|-----------------------|-----------------------------|----------------|----------------------|------|----------|-----|---------------|------|----------------|------|----------------------|
|                  |     |                       |                             |                | %                    | HRS. | QTY.     | %   | HRS.          | QTY. | EQUIPMENT CODE | HRS. |                      |
| 050              | MAT | TEST                  | 1.0                         | PROCESS        | -                    | -    | 1        | 1.0 | 1.0           | 1    | BEN 19         | 1.0  | multimeter (200 Hz)  |
| 070              |     | REP                   | .20                         | PROCESS        | -                    | -    | 1        | 1.0 | 1.0           | 1    | BEN 19         | 1.0  | multimeter (200 Hz)  |
| 075              |     | TEST                  | 1.0                         | PROCESS        | -                    | -    | 1        | 1.0 | 1.0           | 1    | BEN 19         | 1.0  | multimeter (200 Hz)  |
| 080              |     | ASSY                  | 1.0                         | PROCESS        | -                    | -    | 1        | 1.0 | 1.0           | 1    | BEN 19         | 1.0  | multimeter (200 Hz)  |
| 115              |     | PW                    | 1.0                         | PROCESS        | -                    | -    | 1        | 1.0 | 1.0           | 1    | BEN 19         | 1.0  | multimeter (200 Hz)  |
| 9999             |     | OUT                   | 1.0                         | PROCESS        | -                    | -    | 1        | 1.0 | 1.0           | 1    | BEN 19         | 1.0  | multimeter (200 Hz)  |



**SUBJECT**

DATE 5/22/69

| ITEM CODE |   |
|-----------|---|
| PCN       | □ |
| NSN       | □ |
| P/N       | □ |

WCD CAEY11

WCD DATE 97093

**CHART BEGINS**

**CHART ENDS**

**PREPARED BY**

[illegible]

## ○ OPERATION

**TRANSPORTATION**

 **STORAGE**

D DELAY

## INSPECTION



# OPERATION FILE

| NAME <u>GmCandy ALC</u> <u>GO</u> DATE <u>5-20-89</u> RCC <u>MATPCP</u> SHEET <u>1</u> OF <u>6</u> |     |                       |                             |                |                        |                  |      |                 |                    |                |      |                 |                    |                      |  |
|--|-----|-----------------------|-----------------------------|----------------|------------------------|------------------|------|-----------------|--------------------|----------------|------|-----------------|--------------------|----------------------|--|
| WCD <u>CHAZP8</u> WCD DATE <u>88227</u>  |     |                       |                             |                |                        |                  |      |                 |                    |                |      |                 |                    |                      |  |
| OPERATION NUMBER   | RCC | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW INHIBIT | SKILL CODE/LEVEL | QTY. | TIME REQUIRED % | TIME REQUIRED HRS. | EQUIPMENT CODE | QTY. | TIME REQUIRED % | TIME REQUIRED HRS. | DATA SOURCE COMMENTS |  |
| 00   | MAT | IN                    | 1.0                         | TRANSIT        |                        |                  |      |                 |                    |                |      |                 |                    |                      |  |
|  | PCA |                       |                             | SETUP          |                        |                  |      |                 |                    |                |      |                 |                    |                      |  |
|  |     |                       |                             | PROCESS        | 1.0 24.0               |                  |      |                 |                    |                |      |                 |                    |                      |  |
| 010  | MAT |                       |                             | TRANSIT        |                        |                  |      |                 |                    |                |      |                 |                    |                      |  |
|  | PCA | REC                   | 1.0                         | SETUP          |                        |                  |      |                 |                    |                |      |                 |                    |                      |  |
|  |     |                       |                             | PROCESS        |                        |                  |      |                 |                    |                |      |                 |                    |                      |  |
| 015  |     |                       |                             | TRANSIT        |                        |                  |      |                 |                    |                |      |                 |                    |                      |  |
|  |     |                       |                             | SETUP          |                        |                  |      |                 |                    |                |      |                 |                    |                      |  |
|  |     | PROC                  | 1.0                         | PROCESS        |                        |                  |      |                 |                    |                |      |                 |                    |                      |  |
| 020  |     |                       |                             | TRANSIT        |                        |                  |      |                 |                    |                |      |                 |                    |                      |  |
|  |     |                       |                             | SETUP          |                        |                  |      |                 |                    |                |      |                 |                    |                      |  |
|  |     | DIS                   | 1.0                         | PROCESS        |                        |                  |      |                 |                    |                |      |                 |                    |                      |  |
| 030  |     |                       |                             | TRANSIT        |                        |                  |      |                 |                    |                |      |                 |                    |                      |  |
|  |     |                       |                             | SETUP          |                        |                  |      |                 |                    |                |      |                 |                    |                      |  |
|  |     | CLN                   | 1.0                         | PROCESS        |                        |                  |      |                 |                    |                |      |                 |                    |                      |  |

SKILL-9

SKILL-9

SKILL-9



①

| NAME <u>C M Garvey, ALC</u> <u>OC</u> |         | DATE <u>5-20-89</u>                      | NCC <u>MMT PCB</u>          | SHEET <u>2</u> OF <u>4</u> |                        |          |                  |               |             |            |            |     |     |    |
|---------------------------------------|---------|--|-----------------------------|----------------------------|------------------------|----------|------------------|---------------|-------------|------------|------------|-----|-----|----|
| OPERATION # <u>1</u> FILE             |         | WCD <u>CRZLPS</u> WCD DATE <u>882224</u> |                             |                            |                        |          |                  |               |             |            |            |     |     |    |
| OPERATION NUMBER                      | NCC     | OPERATION DESCRIPTION                    | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE             | MANDATORY FLOW (HOURS) | MANPOWER | EQUIPMENT        | TIME REQUIRED | DATA SOURCE |            |            |     |     |    |
|                                       |         |  |                             |                            | %                      | QTY.     | SKILL CODE/LEVEL | %             | HRS.        |            |            |     |     |    |
| 040                                   | MMT PCB | INSP                                     | 1.0                         | TRANSIT                    | -                      | 1        | BY10             | -             | 1.0         | 25         | SKILL 9-10 |     |     |    |
|                                       |         |  |                             | SETUP                      | -                      |          |                  |               |             |            |            | 1   | 1.0 | 25 |
|                                       |         |  |                             | PROCESS                    | -                      |          |                  |               |             |            |            |     |     |    |
| 050                                   | INSP    | 1.0                                      | TRANSIT                     | -                          | 1                      | BY10     | -                | 1.0           | 08          | SKILL 9-10 |            |     |     |    |
|                                       |         |  | SETUP                       | -                          |                        |          |                  |               |             |            | 1          | 1.0 | 08  |    |
|                                       |         |  | PROCESS                     | -                          |                        |          |                  |               |             |            |            |     |     | 1  |
| 060                                   | TEST    | 1.0                                      | TRANSIT                     | -                          | 1                      | BY10     | -                | 1.0           | 08          | SKILL 9-10 |            |     |     |    |
|                                       |         |  | SETUP                       | -                          |                        |          |                  |               |             |            | 1          | 1.0 | 08  |    |
|                                       |         |  | PROCESS                     | -                          |                        |          |                  |               |             |            |            |     |     | 1  |
| 070                                   | REF     | 1.0                                      | TRANSIT                     | -                          | 1                      | BY10     | -                | 1.0           | 25          | SKILL 9-10 |            |     |     |    |
|                                       |         |  | SETUP                       | -                          |                        |          |                  |               |             |            | 1          | 1.0 | 25  |    |
|                                       |         |  | PROCESS                     | -                          |                        |          |                  |               |             |            |            |     |     | 1  |
| 130                                   | Lub     | 1.0                                      | TRANSIT                     | -                          | 1                      | BY10     | -                | 1.0           | 25          | SKILL 9-10 |            |     |     |    |
|                                       |         |  | SETUP                       | -                          |                        |          |                  |               |             |            | 1          | 1.0 | 25  |    |
|                                       |         |  | PROCESS                     | -                          |                        |          |                  |               |             |            |            |     |     | 1  |



| NAME <u>GUNGS, JALY</u> ALC <u>QC</u> DATE <u>5-22-89</u> INCC <u>MAT PCB</u> SHEET <u>3</u> OF <u>6</u> |         |                       |                             |                |                       |                  |      |                 |                    |                |      |                 |                    |                      |   |   |   |
|--|---------|-----------------------|-----------------------------|----------------|-----------------------|------------------|------|-----------------|--------------------|----------------|------|-----------------|--------------------|----------------------|---|---|---|
| ECLIPSE <u>351110</u> WCD <u>CR 12.0</u> WCD DATE <u>88222</u>   |         |                       |                             |                |                       |                  |      |                 |                    |                |      |                 |                    |                      |   |   |   |
| OPERATION NUMBER   | INCC    | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW INQURS | SKILL CODE/LEVEL | QTY. | TIME REQUIRED % | TIME REQUIRED HRS. | EQUIPMENT CODE | QTY. | TIME REQUIRED % | TIME REQUIRED HRS. | DATA SOURCE COMMENTS |   |   |   |
| 110  | MAT PCB | ASBY                  | 1.0                         | TRANSIT        | -                     | HY10             | 1    | -               | .50                | BEN1           | 1    | 1.0             | .50                | SKILL 9-10           |   |   |   |
|  |         |                       |                             | SETUP          | -                     |                  |      |                 |                    |                |      |                 |                    |                      | - | - | - |
|  |         |                       |                             | PROCESS        | -                     |                  |      |                 |                    |                |      |                 |                    |                      | - | - | - |
| 150  | ?       | PROC                  | 1.0                         | TRANSIT        | -                     | HY10             | 1    | -               | .08                | BEN1           | 1    | 1.0             | .08                | SKILL 9-10           |   |   |   |
|  |         |                       |                             | SETUP          | -                     |                  |      |                 |                    |                |      |                 |                    |                      | - | - | - |
|  |         |                       |                             | PROCESS        | -                     |                  |      |                 |                    |                |      |                 |                    |                      | - | - | - |
| 160  | ?       | PROC                  | 1.0                         | TRANSIT        | -                     | HY10             | 1    | -               | .08                | BEN1           | 1    | 1.0             | .08                | SKILL 9-10           |   |   |   |
|  |         |                       |                             | SETUP          | -                     |                  |      |                 |                    |                |      |                 |                    |                      | - | - | - |
|  |         |                       |                             | PROCESS        | -                     |                  |      |                 |                    |                |      |                 |                    |                      | - | - | - |
| 170  | ?       | PROC                  | 1.0                         | TRANSIT        | -                     | HY10             | 1    | -               | .08                | BEN1           | 1    | 1.0             | .08                | SKILL 9-10           |   |   |   |
|  |         |                       |                             | SETUP          | -                     |                  |      |                 |                    |                |      |                 |                    |                      | - | - | - |
|  |         |                       |                             | PROCESS        | -                     |                  |      |                 |                    |                |      |                 |                    |                      | - | - | - |
| 180  | ?       | PROC                  | 1.0                         | TRANSIT        | -                     | HY10             | 1    | -               | .08                | BEN1           | 1    | 1.0             | .08                | SKILL 9-10           |   |   |   |
|  |         |                       |                             | SETUP          | -                     |                  |      |                 |                    |                |      |                 |                    |                      | - | - | - |
|  |         |                       |                             | PROCESS        | -                     |                  |      |                 |                    |                |      |                 |                    |                      | - | - | - |



# OPERATION IOFILE

| NAME <u>Gm Gumbay ALC</u> <u>GO</u> DATE <u>5-22-80</u> RCC <u>MAT PCP</u> SHEET <u>4</u> OF <u>6</u> |            | WCD <u>CRH 308</u> WCD DATE <u>882227</u> |                             |                             |                                |                  |      |                         |                |      |                         |  |
|---|------------|---|-----------------------------|-----------------------------|--------------------------------|------------------|------|-------------------------|----------------|------|-------------------------|--|
| OPERATION NUMBER  | RCC        | OPERATION DESCRIPTION                     | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE              | MANDATORY FLOW HOURS<br>% HRS. | SKILL CODE/LEVEL | QTY. | TIME REQUIRED<br>% HRS. | EQUIPMENT CODE | QTY. | TIME REQUIRED<br>% HRS. | DATA SOURCE COMMENTS                                     |
| 190   | MAT<br>PCA | 1334                                      | 1.0                         | TRANSIT<br>SETUP<br>PROCESS | -<br>-<br>-                    | 1410             | 1    | -<br>-<br>1.0           | BEN 1          | 1    | -<br>-<br>1.0           | -<br>-<br>Skill 9-10                                     |
| 200   |            | 1334                                      | 1.0                         | TRANSIT<br>SETUP<br>PROCESS | -<br>-<br>-                    | 1410             | 1    | -<br>-<br>1.0           | BEN 1          | 1    | -<br>-<br>1.0           | -<br>-<br>Skill 9-10<br>This operation should be at 180. |
| 210   |            | 1400                                      | 1.0                         | TRANSIT<br>SETUP<br>PROCESS | -<br>-<br>-                    | 1410             | 1    | -<br>-<br>1.0           | BEN 1          | 1    | -<br>-<br>1.0           | -<br>-<br>Skill 9-10                                     |
| 220   |            | 1400                                      | 1.0                         | TRANSIT<br>SETUP<br>PROCESS | -<br>-<br>-                    | 1410             | 1    | -<br>-<br>1.0           | BEN 1          | 1    | -<br>-<br>1.0           | -<br>-<br>Skill 9-10                                     |
| 240   |            | 1400                                      | 1.0                         | TRANSIT<br>SETUP<br>PROCESS | -<br>-<br>-                    | 1410             | 1    | -<br>-<br>1.0           | BEN 1          | 1    | -<br>-<br>1.0           | -<br>-<br>Skill 9-10                                     |



| NAME             |      | ALC                   |                             | DATE           |                       | RCC               |      | SHEET           |                    | OF             |      |                 |                    |                      |
|------------------|------|-----------------------|-----------------------------|----------------|-----------------------|-------------------|------|-----------------|--------------------|----------------|------|-----------------|--------------------|----------------------|
| PCN              |      | NSH                   |                             | PHI            |                       | WCD               |      | WCD DATE        |                    | WCD            |      |                 |                    |                      |
| OPERATION NUMBER | RCC  | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW INQURS | SKILL CODE/ LEVEL | QTY. | TIME REQUIRED % | TIME REQUIRED HRS. | EQUIPMENT CODE | QTY. | TIME REQUIRED % | TIME REQUIRED HRS. | DATA SOURCE COMMENTS |
| 310              | 1707 | TEST                  | 1.0                         | TRANSIT        | -                     | 12/10             | 1    | -               | .03                | BEN1           | 1    | 1.0             | .03                | SKILL 11.9-10        |
| 320              | PC19 | REP                   | 1.0                         | SETUP          | -                     | 12/10             | 1    | -               | .02                | BEN1           | 1    | 1.0             | .02                | SKILL 11.9-10        |
| 330              | 1707 | TEST                  | 1.0                         | PROCESS        | -                     | 12/10             | 1    | -               | .08                | BEN1           | 1    | 1.0             | .08                | SKILL 11.9-10        |
| 340              | PC19 | PROC                  | 1.0                         | TRANSIT        | -                     | 12/10             | 1    | -               | .10                | BEN1           | 1    | 1.0             | .10                | SKILL 11.9-10        |
| 350              | 1707 | PROC                  | 1.0                         | SETUP          | -                     | 12/10             | 1    | -               | .17                | BEN1           | 1    | 1.0             | .17                | SKILL 11.9-10        |



# OPERATION PROFILE

| NAME <u>BMB Battery</u> ALC <u>OC</u> DATE <u>5-22-89</u> RCC <u>INTPBA</u> SHEET <u>2</u> OF <u>2</u> |     | WCD <u>CHER 208</u> WCD DATE <u>88227</u> |                              |                |                       |           |   |      |           |     |      |                      |
|--|-----|---|------------------------------|----------------|-----------------------|-----------|---|------|-----------|-----|------|----------------------|
| OPERATION NUMBER   | RCC | OPERATION DESCRIPTION                     | LABORATORY OCCURRENCE FACTOR | OPERATION TYPE | LABORATORY FLOW HOURS | MAINPOWER |   |      | EQUIPMENT |     |      | DATA SOURCE COMMENTS |
|  |     |   |                              |                | %                     | QTY.      | % | INS. | QTY.      | %   | INS. |                      |
| 360  | WAT | PCB ASSY                                  | 1.0                          | TRANSIT        | -                     | 1         | - | .25  | BEN 1     | 1.0 | .25  | SKILL 9-10           |
| 370  |     | PROC                                      | 1.0                          | SETUP          | -                     | 1         | - | .02  | BEN 1     | 1.0 | .02  | SKILL 9-10           |
| 380  |     | PW  | 1.0                          | PROCESS        | -                     | 1         | - | .08  | BEN 1     | 1.0 | .08  | SKILL 9-10           |
| 390  |     | PW  | 1.0                          | TRANSIT        | -                     | 1         | - | .02  | BEN 1     | 1.0 | .02  | SKILL 9-10           |
| 9999   |     | OUT                                       | 1.0                          | PROCESS        | 1.0                   | 336       |   |      |           |     |      |                      |



## FLOW PROCESS CHART

SUBJECT \_\_\_\_\_

DATE 8-22-87

ITEM CODE

PCN  
NSN  
PIN

351119

WCD CAE 202WCD DATE 88227CHART BEGINS 010 -

BTM B. J. Meyer

CHART ENDS 390

PREPARED BY

| OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS | DESCRIPTION | OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS | DESCRIPTION |
|------------------------|----------------|---------|-------------|------------------------|----------------|---------|-------------|
| 010                    | 010            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 015                    | 015            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 020                    | 020            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 030                    | 030            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 040                    | 040            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 050                    | 050            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 060                    | 060            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 070                    | 070            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 080                    | 080            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 090                    | 090            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 100                    | 100            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 110                    | 110            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 120                    | 120            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 130                    | 130            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 140                    | 140            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 150                    | 150            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 160                    | 160            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 170                    | 170            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 180                    | 180            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 190                    | 190            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 200                    | 200            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 210                    | 210            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 220                    | 220            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 240                    | 240            | ⊙⊙⊙□▽   | Test        |                        |                | ⊙⊙⊙□▽   |             |
| 210                    | 210            | ⊙⊙⊙□▽   | Test        |                        |                | ⊙⊙⊙□▽   |             |
| 320                    | 320            | ⊙⊙⊙□▽   | HE-100      |                        |                | ⊙⊙⊙□▽   |             |
| 330                    | 330            | ⊙⊙⊙□▽   | Test        |                        |                | ⊙⊙⊙□▽   |             |
| 340                    | 340            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 350                    | 350            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 360                    | 360            | ⊙⊙⊙□▽   | HE-100      |                        |                | ⊙⊙⊙□▽   |             |
| 370                    | 370            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 380                    | 380            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
| 390                    | 390            | ⊙⊙⊙□▽   | Proc.       |                        |                | ⊙⊙⊙□▽   |             |
|                        |                | ⊙⊙⊙□▽   |             |                        |                | ⊙⊙⊙□▽   |             |
|                        |                | ⊙⊙⊙□▽   |             |                        |                | ⊙⊙⊙□▽   |             |
|                        |                | ⊙⊙⊙□▽   |             |                        |                | ⊙⊙⊙□▽   |             |
|                        |                | ⊙⊙⊙□▽   |             |                        |                | ⊙⊙⊙□▽   |             |

⊙ OPERATION

▽ STORAGE

⊙ INSPECTION

▷ TRANSPORTATION

D DELAY

LSC-20147



# OPERATION PROFILE

| NAME <u>CMC/Quincy</u> ALC <u>QC</u> DATE <u>5-22-89</u> RCC <u>MATPCA</u> SHEET <u>1</u> OF <u>4</u> |         |                       |                             |                |                        |                  |      |                 |                |      |                 |                      |
|---|---------|-----------------------|-----------------------------|----------------|------------------------|------------------|------|-----------------|----------------|------|-----------------|----------------------|
| ECH <u>351138</u> WCD <u>CAEZ02</u> WCD DATE <u>88202</u>   |         |                       |                             |                |                        |                  |      |                 |                |      |                 |                      |
| OPERATION NUMBER  | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS % | SKILL CODE/LEVEL | QTY. | TIME REQUIRED % | EQUIPMENT CODE | QTY. | TIME REQUIRED % | DATA SOURCE COMMENTS |
| 00  | MAT PCA | IN                    | 1.0                         | TRANSIT        |                        |                  |      |                 |                |      |                 |                      |
|   |         |                       |                             | SETUP          |                        |                  |      |                 |                |      |                 |                      |
|   |         |                       |                             | PROCESS        | 1.0                    | 36.0             |      |                 |                |      |                 |                      |
| 010   | MAT PCA | REC                   | 1.0                         | TRANSIT        |                        |                  |      |                 |                |      |                 |                      |
|   |         |                       |                             | SETUP          |                        |                  |      |                 |                |      |                 |                      |
|   |         |                       |                             | PROCESS        |                        |                  |      |                 |                |      |                 |                      |
| 015   | PCA     | PROC                  | 1.0                         | TRANSIT        |                        |                  |      |                 |                |      |                 |                      |
|   |         |                       |                             | SETUP          |                        |                  |      |                 |                |      |                 |                      |
|   |         |                       |                             | PROCESS        |                        |                  |      |                 |                |      |                 |                      |
| 020   | PCA     | PROC                  | 1.0                         | TRANSIT        |                        |                  |      |                 |                |      |                 |                      |
|   |         |                       |                             | SETUP          |                        |                  |      |                 |                |      |                 |                      |
|   |         |                       |                             | PROCESS        |                        |                  |      |                 |                |      |                 |                      |
| 030   | PCA     | CIN                   | 1.0                         | TRANSIT        |                        |                  |      |                 |                |      |                 |                      |
|   |         |                       |                             | SETUP          |                        |                  |      |                 |                |      |                 |                      |
|   |         |                       |                             | PROCESS        |                        |                  |      |                 |                |      |                 |                      |



# OPERATION FILE

| NAME <u>EDWARD J. ALC</u> DATE <u>5-22-89</u> OCC <u>MATPCA</u> SHEET <u>2</u> OF <u>4</u> |     | WCD <u>045702</u> WCD DATE <u>88202</u> |                             |                |                        |                           |                  |      |                 |                    |                |      |                 |                    |                                       |
|--|-----|---|-----------------------------|----------------|------------------------|---------------------------|------------------|------|-----------------|--------------------|----------------|------|-----------------|--------------------|---------------------------------------|
| OPERATION NUMBER   | RCC | OPERATION DESCRIPTION                   | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS % | MANDATORY FLOW HOURS HRS. | SKILL CODE/LEVEL | QTY. | TIME REQUIRED % | TIME REQUIRED HRS. | EQUIPMENT CODE | QTY. | TIME REQUIRED % | TIME REQUIRED HRS. | DATA SOURCE COMMENTS                  |
| 040  | MAT | INSP                                    | 1.0                         | TRANSIT        | -                      | -                         | A410             | 1    | -               | .17                | BEN 1          | 1    | 1.0             | .17                | SKILL-9                               |
| 050  | PCA | REPL                                    | 1.0                         | SETUP          | -                      | -                         | -                | -    | -               | -                  | -              | -    | -               | -                  | Mechanize, do not have any frame bars |
| 051  | -   | PROC                                    | 1.0                         | PROCESS        | -                      | -                         | A410             | 1    | -               | .50                | BEN 1          | 1    | 1.0             | .50                | 1987-1988, only bars in PL 13 CV.     |
| 060  | -   | ASSY                                    | 1.0                         | SETUP          | -                      | -                         | A410             | 1    | -               | .50                | BEN 1          | 1    | 1.0             | .50                | Outgoing - Chassis                    |
| 070  | -   | ASSY                                    | 1.0                         | PROCESS        | -                      | -                         | A410             | 1    | -               | .17                | BEN 1          | 1    | 1.0             | .17                | SKILL-9                               |
| 070  | -   | ASSY                                    | 1.0                         | TRANSIT        | -                      | -                         | A410             | 1    | -               | .02                | BEN 1          | 1    | 1.0             | .02                | Convincing                            |
| 070  | -   | ASSY                                    | 1.0                         | PROCESS        | -                      | -                         | A410             | 1    | -               | .02                | BEN 1          | 1    | 1.0             | .02                | SKILL-9                               |



# OPERATION PROFILE

| NAME <u>Om Cui Ding ALC</u> <u>RC</u> DATE <u>5-22-84</u> RCC <u>MATPCB</u> SHEET <u>3 OF 4</u> |      | WCD <u>001138</u> WCD DATE <u>88202</u> |                             |                |                                  |                              |      |                         |                |      |                         |                      |
|---|------|---|-----------------------------|----------------|----------------------------------|------------------------------|------|-------------------------|----------------|------|-------------------------|----------------------|
| OPERATION NUMBER  | RCC  | OPERATION DESCRIPTION                   | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW INHOURS<br>% INH. | MANPOWER<br>SKILL CODE/LEVEL | QTY. | TIME REQUIRED<br>% INH. | EQUIPMENT CODE | QTY. | TIME REQUIRED<br>% INH. | DATA SOURCE COMMENTS |
| 100   | MAT  | PCB ASSY                                | 1.0                         | TRANSIT        | -                                | BY10                         | 1    | - .02                   | BEN1           | 1    | 1.0 .02                 | SKELL-9              |
| 110   | PCB  | ASSY                                    | 1.0                         | TRANSIT        | -                                | BY10                         | 1    | - .02                   | BEN1           | 1    | 1.0 .02                 | SKELL-9              |
| 120   | TEST | TEST                                    | 1.0                         | TRANSIT        | -                                | BY10                         | 1    | - .03                   | BEN1           | 1    | 1.0 .03                 | SKELL-9              |
| 130   | SWT  | SWT                                     | 1.0                         | TRANSIT        | -                                | BY10                         | 1    | - .03                   | BEN1           | 1    | 1.0 .03                 | SKELL-9              |
| 140   | TEST | TEST                                    | 1.0                         | TRANSIT        | -                                | BY10                         | 1    | - .03                   | BEN1           | 1    | 1.0 .03                 | SKELL-9              |

Col. 2 Stamp -  
TEST MACHINE ON  
NO. 00 NEWBY N.  
SONGSONG-  
DOWN SUBS.  
SKELL-9



# OPERATION PROFILE

SHEET 4 OF 4

| NAME <u>Gm C...</u> ALC <u>DC</u> DATE <u>5-22-89</u> NCC <u>NETPCC</u> |     | WCD DATE <u>88202</u> |                             |                |                      |          |           |               |               |                      |
|---|-----|-----------------------|-----------------------------|----------------|----------------------|----------|-----------|---------------|---------------|----------------------|
| PCN <u>35113</u>  |     | WCD <u>CAE202</u>     |                             |                |                      |          |           |               |               |                      |
| OPERATION NUMBER  | NCC | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS | MANPOWER | EQUIPMENT | TIME REQUIRED | TIME REQUIRED | DATA SOURCE COMMENTS |
|   |     |                       |                             |                | %                    | QTY.     | QTY.      | %             | HRS.          |                      |
| 141   | NET | PRINT                 | 1.0                         | TRANSIT        | 1.0                  | 20       | B307      | 1.0           | 30            | CLEAN ROOM PREP      |
| 150   |     | PROC                  | 1.0                         | PROCESS        |                      |          | BEN1      | 1.0           | 08            | SKILL-9              |
| 160   |     | PROC                  | 1.0                         | PROCESS        |                      |          | BEN1      | 1.0           | 02            | SKILL-9              |
| 170   |     | PW                    | 1.0                         | PROCESS        |                      |          | BEN1      | 1.0           | 08            | SKILL-9              |
| 175   |     | REP                   | 1.0                         | PROCESS        |                      |          | BEN1      | 1.0           | 35            | SKILL-9              |
| 9999  |     | Out                   | 1.0                         | SS             | 1.0                  | 19.2     |           |               |               |                      |



### FLOW PROCESS CHART

SUBJECT \_\_\_\_\_ DATE 88202

ITEM CODE

WCD CAEZ02

WCD DATE 89135

**PK**

4

35113A

**HOW.**

□

**P/M**

**Q**

CHART BEGINS 010

CHART ENDS 175

PREPARED BY CMB-1224

[illegible]

## ○ OPERATION

**▽ STORAGE**

☐ INSPECTION

**TRANSPORTATION**

**D DELAY**



# OPERATION PROFILE

| NAME <u>Baker</u>  |         | ALC <u>OC</u>         |                             | DATE <u>5/9/89</u>    |                      | RCC <u>MAT PCA</u> |          | SHEET <u>  </u> OF <u>  </u> |           |      |               |   |                      |      |
|--------------------|---------|-----------------------|-----------------------------|-----------------------|----------------------|--------------------|----------|------------------------------|-----------|------|---------------|---|----------------------|------|
| PCN <u>35510 A</u> |         | WCD <u>CAEY 12</u>    |                             | WCD DATE <u>88037</u> |                      |                    |          |                              |           |      |               |   |                      |      |
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW HOURS |                    | MANPOWER |                              | EQUIPMENT |      | TIME REQUIRED |   | DATA SOURCE COMMENTS |      |
|                    |         |                       |                             |                       | %                    | HRS.               | QTY.     | SKILL CODE/LEVEL             | %         | HRS. | QTY.          | % |                      | HRS. |
| 00                 | MAT PCA | IN                    | 1.0                         | TRANSIT               |                      |                    |          |                              |           |      |               |   |                      |      |
|                    |         |                       |                             | SETUP                 |                      |                    |          |                              |           |      |               |   |                      |      |
|                    |         |                       |                             | PROCESS               |                      |                    |          |                              |           |      |               |   |                      |      |
|                    |         |                       |                             | TRANSIT               |                      |                    |          |                              |           |      |               |   |                      |      |
|                    |         |                       |                             | SETUP                 |                      |                    |          |                              |           |      |               |   |                      |      |
|                    |         |                       |                             | PROCESS               |                      |                    |          |                              |           |      |               |   |                      |      |
|                    |         |                       |                             | TRANSIT               |                      |                    |          |                              |           |      |               |   |                      |      |
|                    |         |                       |                             | SETUP                 |                      |                    |          |                              |           |      |               |   |                      |      |
|                    |         |                       |                             | PROCESS               |                      |                    |          |                              |           |      |               |   |                      |      |
|                    |         |                       |                             | TRANSIT               |                      |                    |          |                              |           |      |               |   |                      |      |
|                    |         |                       |                             | SETUP                 |                      |                    |          |                              |           |      |               |   |                      |      |
|                    |         |                       |                             | PROCESS               |                      |                    |          |                              |           |      |               |   |                      |      |
|                    |         |                       |                             | TRANSIT               |                      |                    |          |                              |           |      |               |   |                      |      |
|                    |         |                       |                             | SETUP                 |                      |                    |          |                              |           |      |               |   |                      |      |
|                    |         |                       |                             | PROCESS               |                      |                    |          |                              |           |      |               |   |                      |      |

NOTE: THIS SHEET FOR IN-OUT DATES



# OPERATION PROFILE

NAME Parker ALC OC DATE 5/9/89 RCC MAT PCA SHEET 1 OF 8

PCN 35513 A WCD CAEY12 WCD DATE 68037

| PIN | OPERATION NUMBER | RCC  | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |      | SKILL CODE/ LEVEL | MAINPOWER |         | EQUIPMENT |                | TIME REQUIRED |         | DATA SOURCE COMMENTS |      |
|-----|------------------|------|-----------------------|-----------------------------|----------------|----------------------|------|-------------------|-----------|---------|-----------|----------------|---------------|---------|----------------------|------|
|     |                  |      |                       |                             |                | %                    | HRS. |                   | QTY.      | %       | HRS.      | EQUIPMENT CODE | QTY.          | %       |                      | HRS. |
| 010 | PCA              | MAT  | REC                   | 1.0                         | INSTALL        |                      |      |                   |           |         |           |                |               |         | SK 10 7-10           |      |
|     |                  |      |                       |                             | SETUP          |                      |      |                   |           |         |           |                |               |         |                      |      |
|     |                  |      |                       |                             | PROCESS        |                      |      | B410              | 1         | 1.08    |           |                |               |         |                      |      |
| 015 | PCA              | INF  | INFO                  | 1.0                         | INSTALL        |                      |      |                   |           |         |           |                |               |         | SK 11 7-10           |      |
|     |                  |      |                       |                             | SETUP          |                      |      |                   |           |         |           |                |               |         |                      |      |
|     |                  |      |                       |                             | PROCESS        |                      |      |                   |           |         |           |                |               |         |                      |      |
| 017 | PCA              | TEST | TEST                  | 1.0                         | TRANSIT        |                      |      |                   | 1         | 1.0, 25 |           |                |               |         | SK 11 7-10           |      |
|     |                  |      |                       |                             | SETUP          |                      |      |                   | 1         | 1.0, 50 |           |                |               |         |                      |      |
|     |                  |      |                       |                             | PROCESS        |                      |      |                   | 1         | 1.0, 17 | OC 1944   | 1              | 1.0, 17       | 1.0, 67 |                      |      |
| 018 | PCA              | TEST | TEST                  | 1.0                         | INSTALL        |                      |      |                   |           |         |           |                |               |         | SK 11 7-10           |      |
|     |                  |      |                       |                             | SETUP          |                      |      |                   | 1         | 1.0, 08 |           |                |               |         |                      |      |
|     |                  |      |                       |                             | PROCESS        |                      |      |                   | 1         | 1.0, 17 | 3906      | 1              | 1.0, 17       | 1.0, 25 |                      |      |
| 019 | PCA              | TEST | TEST                  | 1.0                         | INSTALL        |                      |      |                   |           |         |           |                |               |         | SK 11 7-10           |      |
|     |                  |      |                       |                             | SETUP          |                      |      |                   | 1         | 1.0, 08 |           |                |               |         |                      |      |
|     |                  |      |                       |                             | PROCESS        |                      |      |                   | 1         | 1.0, 17 | 4060      | 1              | 1.0, 17       | 1.0, 25 |                      |      |

tester



# OPERATIO. PROFILE

| NAME <u>PARXER</u> ALC <u>CL</u> DATE <u>05/9/80</u> RCC <u>MATPCA</u> SHEET <u>2</u> OF <u>8</u> |            |                       |                             |                |                                |                  |                   |                         |                   |      |                         |   |
|---|------------|-----------------------|-----------------------------|----------------|--------------------------------|------------------|-------------------|-------------------------|-------------------|------|-------------------------|---|
| PCN <u>35510A</u> WCD <u>CAE12</u> WCD DATE <u>08037</u>  |            |                       |                             |                |                                |                  |                   |                         |                   |      |                         |   |
| OPERATION NUMBER  | RCC        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS<br>% HRS. | SKILL CODE/LEVEL | MAJ/POWER<br>QTY. | TIME REQUIRED<br>% HRS. | EQUIPMENT<br>CODE | QTY. | TIME REQUIRED<br>% HRS. | DATA SOURCE COMMENTS  |
| 020   | MAT<br>PCM | MACH                  | .50                         | PROCESS        | 10 240                         | -                |                   |                         |                   |      |                         | one machine<br>signature for<br>work.                       |
| 030   | MAT<br>PCA | DIS                   | .50                         | PROCESS        |                                |                  |                   |                         |                   |      |                         | skill 8-10  |
| 040   | MAT<br>PIW | WELD                  | .08                         | PROCESS        | 1.0 240                        |                  |                   |                         |                   |      |                         | skill 8-10<br>per unit,<br>~ 100<br>~ 100<br>~ 100<br>~ 100 |
| 050   | MAT<br>PCA | CLN                   | .50                         | PROCESS        |                                |                  |                   |                         |                   |      |                         |   |
| 060   | MAT<br>PCA | INSP                  | .50                         | PROCESS        |                                |                  |                   |                         |                   |      |                         | skill 8-10<br>visual insp                                   |



# OPERATION FILE

| NAME <u>Baker</u> ALC <u>CC</u> DATE <u>05/11/00</u> RCC <u>MAT PLA</u> SHEET <u>8</u> OF <u>8</u> |     |                       |                             |                |                      |                  |      |               |           |               |                      |
|--|-----|-----------------------|-----------------------------|----------------|----------------------|------------------|------|---------------|-----------|---------------|----------------------|
| PCN <u>35510A</u> WCD <u>CAEY12</u> WCD DATE <u>58097</u>  |     |                       |                             |                |                      |                  |      |               |           |               |                      |
| OPERATION NUMBER   | RCC | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS | SKILL CODE/LEVEL | QTY. | TIME REQUIRED | EQUIPMENT | TIME REQUIRED | DATA SOURCE COMMENTS |
|  |     |                       |                             |                | %                    | HRS.             |      | %             | QTY.      | HRS.          |                      |
| 070  | MAT | TEST                  | .50                         | PROCESS        | -                    | BY10             | 1    | 1.0           | 17        | -             | SK 11 9-10           |
|  | PLA |                       |                             | PROCESS        | -                    |                  | 1    | 1.0           | 50 BEN 15 | 1.0           | SK 11 9-10           |
| 080  |     | TEST                  | .50                         | PROCESS        | -                    |                  | 1    | 1.0           | 05        | -             |                      |
|  |     |                       |                             | PROCESS        | -                    |                  | 1    | 1.0           | 02 4060   | 1.0           | SK 11 9-10           |
| 090  |     | TEST                  | .50                         | PROCESS        | -                    |                  | 1    | 1.0           | 02        | -             |                      |
|  |     |                       |                             | PROCESS        | -                    |                  | 1    | 1.0           | 03 3906   | 1.0           | SK 11 9-10           |
| 100  |     | TEST                  | .50                         | PROCESS        | -                    |                  | 1    | 1.0           | 03        | -             |                      |
|  |     |                       |                             | PROCESS        | -                    |                  | 1    | 1.0           | 02 3906   | 1.0           | SK 11 9-10           |
| 110  |     | TEST                  | .50                         | PROCESS        | -                    |                  | 1    | 1.0           | 02        | -             |                      |
|  |     |                       |                             | PROCESS        | -                    |                  | 1    | 1.0           | 05 4060   | 1.0           | SK 11 9-10           |



# OPERATION FILE

| NAME <u>P. Kar</u> |     | ALC <u>OC</u>         |                             | DATE <u>02/08/12</u>     |                      | RCC <u>02/08/12</u> |          | SHEET <u>1</u> OF <u>8</u> |                |      |                 |                    |                      |
|--------------------|-----|-----------------------|-----------------------------|--------------------------|----------------------|---------------------|----------|----------------------------|----------------|------|-----------------|--------------------|----------------------|
| PCN <u>35510 A</u> |     | WCD <u>SAEY12</u>     |                             | WCD DATE <u>08/03/12</u> |                      |                     |          |                            |                |      |                 |                    |                      |
| OPERATION NUMBER   | RCC | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE           | MANDATORY FLOW HOURS |                     | MANPOWER |                            | EQUIPMENT      |      | TIME REQUIRED % | TIME REQUIRED HRS. | DATA SOURCE COMMENTS |
|                    |     |                       |                             |                          | %                    | HRS.                | QTY.     | SKILL CODE/LEVEL           | EQUIPMENT CODE | QTY. |                 |                    |                      |
| 120                | MAT | TEST                  | .50                         | PROCESS                  | -                    | -                   | 1        | 0410                       | BEN4           | 1    | 1.0             | .02                | SK 11 5-10           |
| 130                | PCA | TEST                  | .50                         | PROCESS                  | -                    | -                   | 1        | 0410                       | BEN4           | 1    | 1.0             | .02                | SK 11 5-10           |
| 140                | PCA | TEST                  | .50                         | PROCESS                  | -                    | -                   | 1        | 0410                       | BEN4           | 1    | 1.0             | .02                | SK 11 5-10           |
| 150                | PCA | TEST                  | .50                         | PROCESS                  | -                    | -                   | 1        | 0410                       | BEN4           | 1    | 1.0             | .02                | SK 11 5-10           |
| 160                | PCA | TEST                  | .50                         | PROCESS                  | -                    | -                   | 1        | 0410                       | BEN4           | 1    | 1.0             | .02                | SK 11 5-10           |



# OPERATION FILE

| NAME <u>Parker</u> ALC <u>OC</u> DATE <u>05/01/89</u> RCC <u>MAT PCA</u> SHEET <u>5</u> OF <u>8</u> |        | WCD <u>CAEY12</u> WCD DATE <u>88033</u> |                                   |                   |                              |                         |      |               |      |                   |      |               |      |                         |
|---|--------|---|-----------------------------------|-------------------|------------------------------|-------------------------|------|---------------|------|-------------------|------|---------------|------|-------------------------|
| PCN<br>RSH<br>PPI   | 35570A |   |                                   |                   |                              |                         |      |               |      |                   |      |               |      |                         |
| OPERATION<br>NUMBER   | RCC    | OPERATION<br>DESCRIPTION                | MANDATORY<br>OCCURRENCE<br>FACTOR | OPERATION<br>TYPE | MANDATORY<br>FLOW HOURS<br>% | SKILL<br>CODE/<br>LEVEL | QTY. | TIME REQUIRED |      | EQUIPMENT<br>CODE | QTY. | TIME REQUIRED |      | DATA SOURCE<br>COMMENTS |
|   |        |   |                                   |                   |                              |                         |      | %             | HRS. |                   |      | %             | HRS. |                         |
| 170   | MAT    | TEST                                    | .50                               | <del>TEST</del>   | -                            |                         |      |               |      |                   |      |               |      |                         |
|   | PCA    |   |                                   | PROCESS           | -                            | BY10                    | 1    | 1.0           | .02  | BEN4              | 1    | 1.0           | .02  | SKILL 9-10              |
| 180   |        | TEST                                    | .50                               | <del>TEST</del>   | -                            |                         | 1    | 1.0           | .03  | -                 | -    | -             | -    | SKILL 9-10              |
|   |        |   |                                   | SETUP             | -                            |                         | 1    | 1.0           | .03  | 4060              | 1    | 1.0           | .10  | SKILL 9-10              |
| 190   |        | TEST                                    | .50                               | <del>TEST</del>   | -                            |                         | 1    | 1.0           | .03  | -                 | -    | -             | -    | (2nd 14 min)            |
|   |        |   |                                   | PROCESS           | -                            |                         | 1    | 1.0           | .07  | 4060              | 1    | 1.0           | .10  | SKILL 9-10              |
| 200   |        | TEST                                    | .50                               | <del>TEST</del>   | -                            |                         |      |               |      |                   |      |               |      |                         |
|   |        |   |                                   | PROCESS           | -                            |                         | 1    | 1.0           | .03  | BEN4              | 1    | 1.0           | .03  | SKILL 9-10              |
| 210   |        | TEST                                    | .50                               | <del>TEST</del>   | -                            |                         |      |               |      |                   |      |               |      |                         |
|   |        |   |                                   | PROCESS           | -                            |                         | 1    | 1.0           | .03  | BEN4              | 1    | 1.0           | .03  | SKILL 9-10              |



# OPERATION FILE

| NAME <u>Parker</u> |        | ALC <u>OC</u>         |                             | DATE <u>05/09/89</u>  |                      | RCC <u>MAT PCA</u> |          | SHEET <u>5</u> OF <u>8</u> |           |      |               |                      |
|--------------------|--------|-----------------------|-----------------------------|-----------------------|----------------------|--------------------|----------|----------------------------|-----------|------|---------------|----------------------|
| PCN <u>35510A</u>  |        | WCD <u>SAE17</u>      |                             | WCD DATE <u>88037</u> |                      |                    |          |                            |           |      |               |                      |
| OPERATION NUMBER   | RCC    | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW HOURS |                    | MANPOWER |                            | EQUIPMENT |      | TIME REQUIRED | DATA SOURCE COMMENTS |
|                    |        |                       |                             |                       | %                    | HRS.               | QTY.     | %                          | HRS.      | QTY. |               |                      |
| 220                | MAT RA | TEST                  | .50                         | SETUP                 | -                    | -                  | 1        | 1.0                        | 1         | 1.0  | 1.0           | SK. 11 9-10          |
| 230                |        | TEST                  | .50                         | PROCESS               | -                    | -                  | 1        | 1.0                        | 1         | 1.0  | 1.0           |                      |
| 240                |        | TEST                  | .50                         | PROCESS               | -                    | -                  | 1        | 1.0                        | 1         | 1.0  | 1.0           | SK. 11 9-10          |
| 245                |        | PROD                  | .50                         | PROCESS               | -                    | -                  | 1        | 1.0                        | 1         | 1.0  | 1.0           | SK. 11 9-10          |
| 250                |        | ASSY                  | .50                         | PROCESS               | -                    | -                  | 1        | 1.0                        | 1         | 1.0  | 1.0           | SK. 11 9-10          |



# OPERATION PROFILE

| NAME <u>Parker</u> ALC <u>α</u> DATE <u>05/09/89</u> RCC <u>MAT PCA</u> SHEET <u>7</u> OF <u>8</u> |         | WCD <u>CALEY12</u> WCD DATE <u>80037</u> |                             |                |                      |                  |           |           |      |               |                      |     |      |
|--|---------|--|-----------------------------|----------------|----------------------|------------------|-----------|-----------|------|---------------|----------------------|-----|------|
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION                    | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS | SKILL CODE/LEVEL | MAINPOWER | EQUIPMENT |      | TIME REQUIRED | DATA SOURCE COMMENTS |     |      |
|  |         |  |                             |                | %                    | HRS.             | QTY.      | %         | HRS. | QTY.          | EQUIPMENT CODE       | %   | HRS. |
| 255  | MAT PCA | TEST                                     | .50                         | SETUP          | -                    | -                | 1         | 1.0       | .03  | -             | -                    | -   | -    |
|  |         |  |                             | PROCESS        | -                    | -                | 1         | 1.0       | .05  | 3906          | OC                   | 1.0 | .08  |
| 260  | MAT ATW | WELD                                     | .50                         | PROCESS        | 10                   | 24.0             | -         | -         | -    | -             | -                    | -   | -    |
| 290  | MAT PCA | TEST                                     | .50                         | PROCESS        | -                    | -                | 1         | 1.0       | .12  | BEN4          | -                    | -   | -    |
| 300  |         | INSP                                     | .50                         | PROCESS        | -                    | -                | 1         | 1.0       | .03  | BEN17         | -                    | 1.0 | .03  |
| 310  |         | TEST                                     | .50                         | SETUP          | -                    | -                | 1         | 1.0       | .03  | -             | -                    | -   | -    |
|  |         |  |                             | PROCESS        | -                    | -                | 1         | 1.0       | .05  | 4060          | OC                   | 1.0 | .08  |



# OPERATION IOFILE

| NAME <u>Archer</u>  |            | ALC <u>OC</u>            |                                   | DATE <u>05/11/89</u> |                         | RCC <u>MATPCA</u>     |           | SHEET <u>8</u> OF <u>8</u> |           |                   |               |     |                         |            |
|---------------------|------------|--------------------------|-----------------------------------|----------------------|-------------------------|-----------------------|-----------|----------------------------|-----------|-------------------|---------------|-----|-------------------------|------------|
| PCW<br>RSH<br>PIN   |            | 35510A                   |                                   | WCD <u>CAE113</u>    |                         | WCD DATE <u>88037</u> |           |                            |           |                   |               |     |                         |            |
| OPERATION<br>NUMBER | RCC        | OPERATION<br>DESCRIPTION | MANDATORY<br>OCCURRENCE<br>FACTOR | OPERATION<br>TYPE    | MANDATORY<br>FLOW HOURS |                       | MAINPOWER |                            | EQUIPMENT |                   | TIME REQUIRED |     | DATA SOURCE<br>COMMENTS |            |
|                     |            |                          |                                   |                      | %                       | HRS.                  | QTY.      | %                          | HRS.      | EQUIPMENT<br>CODE | QTY.          | %   |                         | HRS.       |
| 320                 | MAT<br>PCA | TEST                     | 50                                | TEST                 | -                       | -                     | 1         | 1.0                        | 03        | -                 | -             | -   | -                       |            |
|                     |            |                          |                                   | PROCESS              | -                       | -                     | 1         | 1.0                        | 05        | 3906              | 1             | 1.0 | 08                      | SKILL 7-10 |
| 330                 |            | PW                       | 1.0                               | PROCESS              | -                       | -                     | 1         | 1.0                        | 08        | -                 | -             | -   | -                       | SKILL 5-10 |
| 350                 |            | PW                       | 1.0                               | PROCESS              | -                       | -                     | 1         | 1.0                        | 02        | -                 | -             | -   | -                       | SKILL 9-10 |
| 360                 |            | PW                       | 1.0                               | PROCESS              | -                       | -                     | 1         | 1.0                        | 02        | -                 | -             | -   | -                       | SKILL 9-10 |
| 370                 |            | PW                       | 1.0                               | PROCESS              | -                       | -                     | 1         | 1.0                        | 02        | -                 | -             | -   | -                       | SKILL 9-10 |
| 9999                |            | OUT                      | 1.0                               | PROCESS              | -                       | -                     | 1         | 1.0                        | 02        | -                 | -             | -   | -                       | SKILL 7-10 |
|                     |            |                          |                                   |                      | 10                      |                       | 28.8      |                            |           |                   |               |     |                         |            |



## FLOW PROCESS CHART

SUBJECT \_\_\_\_\_

DATE 05/09/89ITEM CODE  
PCN  
NON.  
PMWCD CAEY12WCD DATE 88087

X 35510A

CHART BEGINS 010CHART ENDS 365

PREPARED BY \_\_\_\_\_

| OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS   | DESCRIPTION | OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS   | DESCRIPTION |
|------------------------|----------------|-----------|-------------|------------------------|----------------|-----------|-------------|
| 010                    | 010            | ○ ○ ○ □ ▽ | REC.        | 290                    | 290            | ○ ○ ○ □ ▽ | TEST        |
| 015                    | 015            | ○ ○ ○ □ ▽ | INSP        | 300                    | 300            | ○ ○ ○ □ ▽ | INSP        |
| 017                    | -              | ○ ○ ○ □ ▽ | TEST        | 310                    | 310            | ○ ○ ○ □ ▽ | TEST        |
| 018                    | -              | ○ ○ ○ □ ▽ | TEST        | 320                    | 320            | ○ ○ ○ □ ▽ | TEST        |
| 019                    | -              | ○ ○ ○ □ ▽ | TEST        | 330                    | 330            | ○ ○ ○ □ ▽ | PW          |
| 020                    | 020            | ○ ○ ○ □ ▽ | MACH        | 350                    | 350            | ○ ○ ○ □ ▽ | PW          |
| 030                    | 030            | ○ ○ ○ □ ▽ | OIS         | 360                    | 360            | ○ ○ ○ □ ▽ | PW          |
| 040                    | 040            | ○ ○ ○ □ ▽ | WEID        | 365                    | 365            | ○ ○ ○ □ ▽ | PW          |
| 050                    | 050            | ○ ○ ○ □ ▽ | LIN         |                        |                | ○ ○ ○ □ ▽ |             |
| 060                    | 060            | ○ ○ ○ □ ▽ | INSP        |                        |                | ○ ○ ○ □ ▽ |             |
| 070                    | 070            | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 080                    | 080            | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 090                    | 090            | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 100                    | 100            | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 110                    | 110            | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 120                    | 120            | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 130                    | 130            | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 140                    | 140            | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 150                    | 150            | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 160                    | 160            | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 170                    | 170            | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 180                    | 180            | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 190                    | 190            | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 200                    | 200            | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 210                    | 210            | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 220                    | 220            | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 230                    | 230            | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 240                    | 240            | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 245                    | 245            | ○ ○ ○ □ ▽ | ROC         |                        |                | ○ ○ ○ □ ▽ |             |
| 250                    | 250            | ○ ○ ○ □ ▽ | ASSY        |                        |                | ○ ○ ○ □ ▽ |             |
| 255                    | -              | ○ ○ ○ □ ▽ | TEST        |                        |                | ○ ○ ○ □ ▽ |             |
| 260                    | 260            | ○ ○ ○ □ ▽ | WEID        |                        |                | ○ ○ ○ □ ▽ |             |

○ OPERATION

▽ STORAGE

□ INSPECTION

◇ TRANSPORTATION

D DELAY

LSC-20147



5.3 ALU 24 12/1-1K

# OPERATION PROFILE

NAME LCARIES ALC OK CA DATE 5-4-82 RCC MAT PCA SHEET 1 OF 3

| WCD <u>CAAD01</u> WCD DATE <u>66291</u>     |            |                       |                             |                |                                |                  |      |                         |                |       |                      |                         |  |
|---|------------|-----------------------|-----------------------------|----------------|--------------------------------|------------------|------|-------------------------|----------------|-------|----------------------|-------------------------|--|
| OPERATION NUMBER                            | RCC        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANPOWER                       |                  |      | EQUIPMENT               |                |       | DATA SOURCE COMMENTS |                         |  |
|   |            |                       |                             |                | MANDATORY FLOW HOURS<br>% HRS. | SKILL CODE/LEVEL | QTY. | TIME REQUIRED<br>% HRS. | EQUIPMENT CODE | QTY.  |                      | TIME REQUIRED<br>% HRS. |  |
| 00  | MAT<br>PCA | IN                    | 1.0                         | TRANSIT        |                                |                  |      |                         |                |       |                      |                         |  |
|   |            |                       |                             | SETUP          |                                |                  |      |                         |                |       |                      |                         |  |
|   |            |                       |                             | PROCESS        | 1.0                            | 32.0             |      |                         |                |       |                      |                         |  |
| 010   | MAT<br>PCA | REC                   | 1.0                         | TRANSIT        |                                |                  |      |                         |                |       |                      |                         |  |
|   |            |                       |                             | SETUP          |                                |                  |      |                         |                |       |                      |                         |  |
|   |            |                       |                             | PROCESS        |                                | AY10             | 1.0  | 1.0                     | 1.0            |       |                      |                         |  |
| 020   |            | DIS                   | 1.0                         | TRANSIT        |                                |                  |      |                         |                |       |                      |                         |  |
|   |            |                       |                             | SETUP          |                                |                  |      |                         |                |       |                      |                         |  |
|   |            |                       |                             | PROCESS        |                                |                  | 1.0  | 1.0                     | 1.0            | BEN 7 | 1.0                  | 5                       |  |
| 030   |            | CLEAN                 | 1.0                         | TRANSIT        |                                |                  |      |                         |                |       |                      |                         |  |
|   |            |                       |                             | SETUP          |                                |                  |      |                         |                |       |                      |                         |  |
|   |            |                       |                             | PROCESS        |                                |                  | 1.0  | 1.0                     | 1.0            | BEN 7 | 1.0                  | 50                      |  |
| 040   |            | INSP                  | 1.0                         | TRANSIT        |                                |                  |      |                         |                |       |                      |                         |  |
|   |            |                       |                             | SETUP          |                                |                  |      |                         |                |       |                      |                         |  |
|   |            |                       |                             | PROCESS        |                                |                  | 1.0  | 1.0                     | 1.0            | BEN 7 | 1.0                  | 20                      |  |
| 180 DAY CAL. 1090 TO MCH 3000 (COMPUTATION) |            |                       |                             |                |                                |                  |      |                         |                |       |                      |                         |  |



# OPERATION PROFILE

NAME Carter ALC OC DATE 5/4/89 RCC MAT PCA SHEET 2 OF 3

| WCD 32215A WCD CA0081 WCD DATE 862291 |            |                       |                             |                |                      |      |                  |          |     |           |      |                                |     |      |
|---------------------------------------|------------|-----------------------|-----------------------------|----------------|----------------------|------|------------------|----------|-----|-----------|------|--------------------------------|-----|------|
| OPERATION NUMBER                      | RCC        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |      | SKILL CODE/LEVEL | MANPOWER |     | EQUIPMENT |      | DATA SOURCE COMMENTS           |     |      |
|                                       |            |                       |                             |                | %                    | HRS. |                  | QTY.     | %   | HRS.      | QTY. |                                | %   | HRS. |
| 050                                   | MAT<br>PCA | REP.                  | 1.0                         | TRANSIT        | -                    | -    | AY10             | -        | -   | -         | -    | AIRBOR PRESS                   |     |      |
|                                       |            |                       |                             | SETUP          | -                    | -    |                  | -        | -   | -         | -    |                                |     |      |
|                                       |            |                       |                             | PROCESS        | -                    | -    |                  | -        | 1.0 | .75       | 1    |                                | 1.0 | .75  |
| 060                                   |            | ASSY                  | 1.0                         | TRANSIT        | -                    | -    |                  | -        | -   | -         | -    |                                |     |      |
|                                       |            |                       |                             | SETUP          | -                    | -    |                  | -        | -   | -         | -    |                                |     |      |
|                                       |            |                       |                             | PROCESS        | -                    | -    |                  | 1.0      | 1.3 | BEN7      | 1    |                                | 1.0 | 1.3  |
| 070                                   |            | TEST                  | 1.0                         | TRANSIT        | -                    | -    |                  | -        | -   | -         | -    | (4) TEST STATION<br>MULTI GAGE |     |      |
|                                       |            |                       |                             | SETUP          | -                    | -    |                  | -        | -   | -         | -    |                                |     |      |
|                                       |            |                       |                             | PROCESS        | 1.0                  | 3.0  |                  | 1        | 1.0 | .75       | BEN7 |                                | 1   | 1.0  |
| 080                                   |            | PH                    | 1.0                         | TRANSIT        | -                    | -    |                  | -        | -   | -         | -    |                                |     |      |
|                                       |            |                       |                             | SETUP          | -                    | -    |                  | -        | -   | -         | -    |                                |     |      |
|                                       |            |                       |                             | PROCESS        | -                    | -    |                  | 1        | 1.0 | .75       | BEN7 |                                | 1   | 1.0  |
| 090                                   |            | PH                    | 1.0                         | TRANSIT        | -                    | -    |                  | -        | -   | -         | -    |                                |     |      |
|                                       |            |                       |                             | SETUP          | -                    | -    |                  | -        | -   | -         | -    |                                |     |      |
|                                       |            |                       |                             | PROCESS        | -                    | -    |                  | 1        | 1.0 | .75       | BEN7 |                                | 1   | 1.0  |
|                                       |            |                       |                             | PROCESS        | -                    | -    |                  | 1        | 1.0 | 1.0       | BEN7 | 1                              | 1.0 | 1.0  |



# OPERATION FILE

| NAME <u>Curtis</u> |           | ALC <u>OC</u>         |                             | DATE <u>5/4/82</u>    |                                | RCC <u>MATRA</u> |      | SHEET <u>3</u> OF <u>3</u> |                |      |                      |                         |
|--------------------|-----------|-----------------------|-----------------------------|-----------------------|--------------------------------|------------------|------|----------------------------|----------------|------|----------------------|-------------------------|
| WCD <u>37719A</u>  |           | WCD <u>CAROL</u>      |                             | WCD DATE <u>86291</u> |                                |                  |      |                            |                |      |                      |                         |
| OPERATION NUMBER   | RCC       | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANPOWER                       |                  |      | EQUIPMENT                  |                |      | DATA SOURCE COMMENTS |                         |
|                    |           |                       |                             |                       | MANDATORY FLOW HOURS<br>% HRS. | SKILL CODE/LEVEL | QTY. | TIME REQUIRED<br>% HRS.    | EQUIPMENT CODE | QTY. |                      | TIME REQUIRED<br>% HRS. |
| 160                | MAT<br>RA | PH                    | 1.0                         | PROCESS               | 1.0                            | AP10             | 1.0  | 1.0                        |                |      |                      |                         |
|                    |           |                       |                             | TRANSIT               |                                |                  |      |                            |                |      |                      |                         |
|                    |           |                       |                             | SETUP                 |                                |                  |      |                            |                |      |                      |                         |
| 9999               |           | DUT                   | 1.0                         | PROCESS               | 1.0                            |                  |      |                            |                |      |                      |                         |
|                    |           |                       |                             | TRANSIT               |                                |                  |      |                            |                |      |                      |                         |
|                    |           |                       |                             | SETUP                 |                                |                  |      |                            |                |      |                      |                         |
|                    |           |                       |                             | PROCESS               |                                |                  |      |                            |                |      |                      |                         |
|                    |           |                       |                             | TRANSIT               |                                |                  |      |                            |                |      |                      |                         |
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|                    |           |                       |                             | PROCESS               |                                |                  |      |                            |                |      |                      |                         |







# OPERATION TOFILE

|                    |         |                       |                             |                    |                                |                  |
|--------------------|---------|-----------------------|-----------------------------|--------------------|--------------------------------|------------------|
| NAME <u>Parker</u> |         | ALC <u>OC</u>         | DATE <u>5/16/89</u>         | RCC <u>MAT PCA</u> | SHEET <u>1</u> OF <u>1</u>     |                  |
| WCD <u>CAEM09</u>  |         | WCD DATE <u>88289</u> |                             |                    |                                |                  |
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE     | MANDATORY FLOW HOURS<br>% INH. | SKILL CODE/LEVEL |
| 00                 | MAT PCA | IN                    | 1.0                         | TRANSIT            | 1.0 36.0                       |                  |
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# OPERATION: CFIL

| NAME <u>Parker</u> |                         | ALC <u>DC</u>         |                             | DATE <u>5/16/89</u>     |                                | RCC <u>MATPCA</u>      |              | SHEET <u>1</u> OF <u>5</u> |                |                      |                   |
|--------------------|-------------------------|-----------------------|-----------------------------|-------------------------|--------------------------------|------------------------|--------------|----------------------------|----------------|----------------------|-------------------|
| PCN <u>38643A</u>  |                         | WCD <u>CAEMQY</u>     |                             | WCD DATE <u>5/16/89</u> |                                | EQUIPMENT <u>58039</u> |              |                            |                |                      |                   |
| OPERATION NUMBER   | RCC                     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE          | MANDATORY FLOW HOURS<br>% HRS. | MANPOWER               |              | EQUIPMENT                  |                | DATA SOURCE COMMENTS |                   |
|                    |                         |                       |                             |                         |                                | SKILL CODE/LEVEL       | QTY.         | TIME REQUIRED<br>% HRS.    | EQUIPMENT CODE |                      | QTY.              |
| 010                | <u>mat</u><br><u>KA</u> | <u>REC</u>            | <u>1.0</u>                  | <u>PROCESS</u>          | -                              | -                      | <u>AY 10</u> | <u>1</u>                   | -              | -                    | <u>SK 11 5-10</u> |
| 020                |                         | <u>INSP</u>           | <u>1.0</u>                  | <u>PROCESS</u>          | -                              | -                      |              |                            |                |                      | <u>SK 11 5-10</u> |
| 030                |                         | <u>INSP</u>           | <u>1.0</u>                  | <u>PROCESS</u>          | -                              | -                      |              |                            |                |                      | <u>SK 11 5-10</u> |
| 035                |                         | <u>INSP</u>           | <u>1.0</u>                  | <u>PROCESS</u>          | -                              | -                      |              |                            |                |                      | <u>SK 11 5-10</u> |
| 040                |                         | <u>TEST</u>           | <u>1.0</u>                  | <u>SETUP</u>            | -                              | -                      |              |                            |                |                      | <u>SK 11 5-10</u> |

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# OPERATION OFILE

NAME Parker ALC OC DATE 5/16/89 RCC MATPCA SHEET 2 OF 5

| WCD CAEM04        |                     |     |                          |                                   |                   |                         |      |                         |           |     |                   |       |               |     | WCD DATE 8/23/9  |      |  |
|-------------------|---------------------|-----|--------------------------|-----------------------------------|-------------------|-------------------------|------|-------------------------|-----------|-----|-------------------|-------|---------------|-----|--|------|--|
| PCN<br>NSN<br>PMI | OPERATION<br>NUMBER | RCC | OPERATION<br>DESCRIPTION | MANDATORY<br>OCCURRENCE<br>FACTOR | OPERATION<br>TYPE | MANDATORY<br>FLOW HOURS |      | SKILL<br>CODE/<br>LEVEL | MAINPOWER |     | EQUIPMENT<br>CODE | QTY.  | TIME REQUIRED |     | DATA SOURCE<br>COMMENTS  |      |  |
|                   |                     |     |                          |                                   |                   | %                       | HRS. |                         | QTY.      | %   |                   |       | HRS.          |     |  |      |  |
| 0915              | MAT<br>PCA          |     | TEST                     | 1.0                               | TRANSFER          |                         |      |                         |           |     |                   |       |               |     | MAT test<br>45 min<br><br>(note -<br>combined with<br>several steps)<br>skill 5-10 |      |  |
|                   |                     |     |                          |                                   | SETUP             |                         |      |                         | 1         | 1.0 | 1.03              |       |               |     |  |      |  |
|                   |                     |     |                          |                                   | PROCESS           | 1.0                     | .75  | AY10                    | 1         | 1.0 | 1.0               | 4265  | 1             | 1.0 |  | 1.78 |  |
| 120               |                     |     | INFO                     | 1.0                               | TRANSFER          |                         |      |                         |           |     |                   |       |               |     | 80% pers<br>all tests,<br>routed to<br>inventory                                   |      |  |
|                   |                     |     |                          |                                   |                   |                         |      |                         |           |     |                   |       |               |     |  |      |  |
|                   |                     |     |                          |                                   |                   |                         |      |                         |           |     |                   |       |               |     |  |      |  |
| 130               |                     |     | DIS                      | .20                               | TRANSFER          |                         |      |                         |           |     |                   |       |               |     | includes removal<br>of potting compound  |      |  |
|                   |                     |     |                          |                                   | SETUP             |                         |      |                         |           |     |                   |       |               |     |  |      |  |
|                   |                     |     |                          |                                   | PROCESS           |                         |      |                         | 1         | 1.0 | .75               | BEN19 | 1             | 1.0 |  | .75  |  |
| 140               |                     |     | CLN                      | .20                               | TRANSFER          |                         |      |                         |           |     |                   |       |               |     |  |      |  |
|                   |                     |     |                          |                                   | SETUP             |                         |      |                         |           |     |                   |       |               |     |  |      |  |
|                   |                     |     |                          |                                   | PROCESS           |                         |      |                         | 1         | 1.0 | .33               | BEN19 | 1             | 1.0 |  | .33  |  |
| 150               |                     |     | INSP                     | .20                               | TRANSFER          |                         |      |                         |           |     |                   |       |               |     | Visual   |      |  |
|                   |                     |     |                          |                                   | SETUP             |                         |      |                         |           |     |                   |       |               |     |  |      |  |
|                   |                     |     |                          |                                   | PROCESS           |                         |      |                         | 1         | 1.0 | .17               | BEN19 | 1             | 1.0 |  | .17  |  |



# OPERATION PROFILE

| NAME <u>Parker</u> |         | ALC <u>OC</u>         |                             | DATE <u>5/16/68</u>  |                                | RCC <u>MAT PCA</u> |      | SHEET <u>3</u> OF <u>5</u> |           |                         |                      |   |
|--------------------|---------|-----------------------|-----------------------------|----------------------|--------------------------------|--------------------|------|----------------------------|-----------|-------------------------|----------------------|---|
| PIN <u>38643A</u>  |         | WCD <u>CAE M04</u>    |                             | WCD DATE <u>5839</u> |                                |                    |      |                            |           |                         |                      |   |
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE       | MANDATORY FLOW HOURS<br>% HRS. | MANPOWER           |      | EQUIPMENT                  |           | TIME REQUIRED<br>% HRS. | DATA SOURCE COMMENTS |   |
|                    |         |                       |                             |                      |                                | SKILL CODE/LEVEL   | QTY. | %                          | HRS.      |                         |                      | EQUIPMENT CODE  |
| 151                | MAT PCA | REP                   | .15                         | PROCESS              | -                              | AY10               | 1    | 1.0                        | 50 BEN 19 | 1                       | 1.0                  | 75% of all failures involve M3 module & require its removal and replacement                 |
| 152                |         | REP                   | .04                         | PROCESS              | -                              |                    | 1    | 1.0                        | 50 BEN 19 | 1                       | 1.0                  | Both the M4 and M1 modules fail 10% of the time and require removal & replacement. SEE 5-10 |
| 153                |         | REP                   | .01                         | PROCESS              | -                              |                    | 1    | 1.0                        | 50 BEN 19 | 1                       | 2.0                  | The M5 module fails approx. 5% of the time and requires replacement. SEE 5-10               |
| 160                |         | INSP                  | .20                         | PROCESS              | -                              |                    | 1    | 1.0                        | 50 BEN 19 | 1                       | 1.0                  | inspect potentiometer   |
| 170                |         | ASSY                  | .20                         | PROCESS              | -                              |                    | 1    | 1.0                        | 50 BEN 19 | 1                       | 1.0                  | SEE 5-10  |

(Note: All failures not at ambient temperatures)



# OPERATION PROFILE

NAME Parker ALC OC DATE 5/16/89 RCC MAT PCA SHEET 4 OF 5

PCN  
NSN

38643A

WCD CAEMO1

WCD DATE 88289

| OPERATION NUMBER | RCC        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |      | SKILL CODE/LEVEL | MANPOWER |     | TIME REQUIRED |     | EQUIPMENT      |      | TIME REQUIRED |      | DATA SOURCE COMMENTS                 |
|------------------|------------|-----------------------|-----------------------------|----------------|----------------------|------|------------------|----------|-----|---------------|-----|----------------|------|---------------|------|--------------------------------------|
|                  |            |                       |                             |                | %                    | HRS. |                  | QTY.     | %   | HRS.          | %   | EQUIPMENT CODE | QTY. | %             | HRS. |                                      |
| 185              | MAT<br>PCA | ASSY                  | .20                         | PROCESS        | 1.0                  | 1.0  | AV 10            | 1        | 1.0 | .67           | 1.0 | 4285           | 1    | 1.0           | 1.67 | several steps including drying time. |
| 270              |            | TEST                  | .20                         | SETUP          | -                    | -    |                  | 1        | 1.0 | .03           | -   |                | -    | -             | -    | several steps involved, hour test.   |
| 340              |            | TEST                  | .20                         | PROCESS        | -                    | -    |                  | 1        | 1.0 | 1.0           | 1.0 | 4285           | 1    | 1.0           | 1.03 | see 11 5-10                          |
| 350              |            | TEST                  | 1.0                         | PROCESS        | -                    | -    |                  | 1        | 1.0 | .17           | 1.0 | BEN 19         | 1    | 1.0           | .17  | see 11 5-10                          |
| 360              |            | TEST                  | 1.0                         | PROCESS        | -                    | -    |                  | 1        | 1.0 | .17           | 1.0 | BEN 19         | 1    | 1.0           | .17  | mechanical pressure test             |
|                  |            |                       |                             |                | -                    | -    |                  | 1        | 1.0 | .50           | 1.0 | BEN 19         | 1    | 1.0           | .50  | vibration test                       |
|                  |            |                       |                             |                | -                    | -    |                  | 1        | 1.0 | .50           | 1.0 | BEN 19         | 1    | 1.0           | .50  | see 11 5-10                          |



# OPERATION .OF FILE

| NAME <u>Parker</u> |         | ALC <u>OC</u>         |                             | DATE <u>5/16/88</u>   |                      | RCC <u>MATPCA</u> |                   | SHEET <u>5</u> OF <u>5</u> |      |               |      |                |      |               |      |                      |  |  |
|--------------------|---------|-----------------------|-----------------------------|-----------------------|----------------------|-------------------|-------------------|----------------------------|------|---------------|------|----------------|------|---------------|------|----------------------|--|--|
| PCN <u>38643A</u>  |         | WCD <u>CAEM04</u>     |                             | WCD DATE <u>88239</u> |                      |                   |                   |                            |      |               |      |                |      |               |      |                      |  |  |
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW HOURS |                   | SKILL CODE/ LEVEL |                            | QTY. | TIME REQUIRED |      | EQUIPMENT CODE | QTY. | TIME REQUIRED |      | DATA SOURCE COMMENTS |  |  |
|                    |         |                       |                             |                       | %                    | HRS.              | %                 | HRS.                       |      | %             | HRS. |                |      | %             | HRS. |                      |  |  |
| 399                | MAT PCA | PW                    | 1.0                         | TRANSIT               |                      |                   |                   |                            |      |               |      |                |      |               |      |                      |  |  |
|                    |         |                       |                             | SETUP                 |                      |                   |                   |                            |      |               |      |                |      |               |      |                      |  |  |
|                    |         |                       |                             | PROCESS               |                      |                   |                   |                            |      |               |      |                |      |               |      |                      |  |  |
| 9999               |         | OUT                   | 1.0                         | TRANSIT               |                      |                   |                   |                            |      |               |      |                |      |               |      |                      |  |  |
|                    |         |                       |                             | SETUP                 |                      |                   |                   |                            |      |               |      |                |      |               |      |                      |  |  |
|                    |         |                       |                             | PROCESS               |                      |                   |                   |                            |      |               |      |                |      |               |      |                      |  |  |
|                    |         |                       |                             | TRANSIT               |                      |                   |                   |                            |      |               |      |                |      |               |      |                      |  |  |
|                    |         |                       |                             | SETUP                 |                      |                   |                   |                            |      |               |      |                |      |               |      |                      |  |  |
|                    |         |                       |                             | PROCESS               |                      |                   |                   |                            |      |               |      |                |      |               |      |                      |  |  |
|                    |         |                       |                             | TRANSIT               |                      |                   |                   |                            |      |               |      |                |      |               |      |                      |  |  |
|                    |         |                       |                             | SETUP                 |                      |                   |                   |                            |      |               |      |                |      |               |      |                      |  |  |
|                    |         |                       |                             | PROCESS               |                      |                   |                   |                            |      |               |      |                |      |               |      |                      |  |  |
|                    |         |                       |                             | TRANSIT               |                      |                   |                   |                            |      |               |      |                |      |               |      |                      |  |  |
|                    |         |                       |                             | SETUP                 |                      |                   |                   |                            |      |               |      |                |      |               |      |                      |  |  |
|                    |         |                       |                             | PROCESS               |                      |                   |                   |                            |      |               |      |                |      |               |      |                      |  |  |











# OPERATION TOFILE

NAME Parker ALC OC DATE 5/19/89 RCC MAT PCA SHEET 1 OF 4

PCN  
TASK  
PRI

WCD CAEM 22

WCD DATE 88239

| OPERATION NUMBER | RCC        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS<br>% INRS. | MAINPOWER        |      | EQUIPMENT CODE | EQUIPMENT QTY. | TIME REQUIRED |       | DATA SOURCE COMMENTS |
|------------------|------------|-----------------------|-----------------------------|----------------|---------------------------------|------------------|------|----------------|----------------|---------------|-------|----------------------|
|                  |            |                       |                             |                |                                 | SKILL CODE/LEVEL | QTY. |                |                | %             | INRS. |                      |
| 010              | MAT<br>PCA | REC                   | 1.0                         |                |                                 |                  |      |                |                |               |       |                      |
|                  |            |                       |                             |                |                                 |                  |      |                |                |               |       |                      |
|                  |            |                       |                             | PROCESS        |                                 |                  |      |                |                |               |       |                      |
| 020              |            | INFO                  | 1.0                         |                |                                 |                  |      |                |                |               |       |                      |
|                  |            |                       |                             |                |                                 |                  |      |                |                |               |       |                      |
|                  |            |                       |                             | PROCESS        |                                 |                  |      |                |                |               |       |                      |
| 030              |            | INSP                  | 1.0                         |                |                                 |                  |      |                |                |               |       |                      |
|                  |            |                       |                             |                |                                 |                  |      |                |                |               |       |                      |
|                  |            |                       |                             | PROCESS        |                                 |                  |      |                |                |               |       |                      |
| 035              |            | TEST                  | 1.0                         |                |                                 |                  |      |                |                |               |       |                      |
|                  |            |                       |                             |                |                                 |                  |      |                |                |               |       |                      |
|                  |            |                       |                             | PROCESS        |                                 |                  |      |                |                |               |       |                      |
| 040              | MAT<br>PCM | MACH                  | .05                         |                |                                 |                  |      |                |                |               |       |                      |
|                  |            |                       |                             |                |                                 |                  |      |                |                |               |       |                      |
|                  |            |                       |                             | PROCESS        |                                 |                  |      |                |                |               |       |                      |

5-11 9-10

5-11 5-10

Visual insp. for  
depth, scratches,  
nicks, marks

5-11 5-10

5-11 5-10

5-11 5-10



# OPERATION PROFILE

NAME Parker ALC 26 DATE 5/19/89 RCC MAF RA SHEET 2 OF 2

PCN 502971 WCD CAEM22 WCD DATE 88 239

| OPERATION NUMBER | RCC    | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |      | SKILL CODE/LEVEL | MAIN POWER |   | EQUIPMENT |      | DATA SOURCE COMMENTS |
|------------------|--------|-----------------------|-----------------------------|----------------|----------------------|------|------------------|------------|---|-----------|------|----------------------|
|                  |        |                       |                             |                | %                    | HRS. |                  | QTY.       | % | HRS.      | QTY. |                      |
| 00               | MAF RA | IN                    | 1.0                         | TRANSIT        |                      |      |                  |            |   |           |      |                      |
|                  |        |                       |                             | SETUP          |                      |      |                  |            |   |           |      |                      |
|                  |        |                       |                             | PROCESS        | 1.0                  | 19.2 |                  |            |   |           |      |                      |
|                  |        |                       |                             | TRANSIT        |                      |      |                  |            |   |           |      |                      |
|                  |        |                       |                             | SETUP          |                      |      |                  |            |   |           |      |                      |
|                  |        |                       |                             | PROCESS        |                      |      |                  |            |   |           |      |                      |
|                  |        |                       |                             | TRANSIT        |                      |      |                  |            |   |           |      |                      |
|                  |        |                       |                             | SETUP          |                      |      |                  |            |   |           |      |                      |
|                  |        |                       |                             | PROCESS        |                      |      |                  |            |   |           |      |                      |
|                  |        |                       |                             | TRANSIT        |                      |      |                  |            |   |           |      |                      |
|                  |        |                       |                             | SETUP          |                      |      |                  |            |   |           |      |                      |
|                  |        |                       |                             | PROCESS        |                      |      |                  |            |   |           |      |                      |
|                  |        |                       |                             | TRANSIT        |                      |      |                  |            |   |           |      |                      |
|                  |        |                       |                             | SETUP          |                      |      |                  |            |   |           |      |                      |
|                  |        |                       |                             | PROCESS        |                      |      |                  |            |   |           |      |                      |

Note: This sheet for IN-OUT rates



# OPERATION PROFILE

| NAME <u>Parker</u> |     | ALC <u>QC</u>         |                             | DATE <u>5/10/89</u>   |                                | RCC <u>MAT/PCA</u>    |      | SHEET <u>1</u> OF <u>4</u> |                |      |                         |   |
|--------------------|-----|-----------------------|-----------------------------|-----------------------|--------------------------------|-----------------------|------|----------------------------|----------------|------|-------------------------|---|
| WCD <u>CAEMOS</u>  |     | WCD DATE <u>89094</u> |                             | WCD DATE <u>89094</u> |                                | WCD DATE <u>89094</u> |      | WCD DATE <u>89094</u>      |                |      |                         |   |
| OPERATION NUMBER   | RCC | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW HOURS<br>% HRS. | SKILL CODE/LEVEL      | QTY. | TIME REQUIRED<br>% HRS.    | EQUIPMENT CODE | QTY. | TIME REQUIRED<br>% HRS. | DATA SOURCE COMMENTS  |
| 00                 | MAT | IN                    | 1.0                         | TRANSIT               | 1.0 28.0                       |                       |      |                            |                |      |                         |   |
| 010                | PCA | REC                   | 1.0                         | PROCESS               |                                |                       |      |                            |                |      |                         |   |
| 020                | MAT | INFO                  | 1.0                         | PROCESS               |                                | AY10                  | 1    | 1.0 03                     |                |      |                         | 5-11 5-12   |
| 030                | MAT | INSP                  | 1.0                         | PROCESS               |                                |                       | 1    | 1.0 03                     | BLN 20         | 1    | 1.0 03                  | 5-11 5-12   |
| 040                | MAT | TEST                  | 1.0                         | PROCESS               |                                |                       | 1    | 1.0 17                     |                |      |                         | Flow tube test performed in 3108 by MAT/PCA technician (Note: 4/10/89 5-12/89 see pa 217) |



# OPERATION PROFILE

| NAME <u>Acker</u> |       | ALC <u>OC</u>         |                             | DATE <u>5/10/65</u>   |                      | RCC <u>MATRA</u> |          | SHEET <u>2</u> OF <u>4</u> |           |      |  |                            |
|-------------------|-------|-----------------------|-----------------------------|-----------------------|----------------------|------------------|----------|----------------------------|-----------|------|--|----------------------------|
| NSN <u>38645A</u> |       | WCD <u>CAEMOF</u>     |                             | WCD DATE <u>89054</u> |                      |                  |          |                            |           |      |  |                            |
| OPERATION NUMBER  | RCC   | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW HOURS |                  | MANPOWER |                            | EQUIPMENT |      | TIME REQUIRED HRS.   | DATA SOURCE COMMENTS       |
|                   |       |                       |                             |                       | %                    | HRS.             | QTY.     | %                          | HRS.      | QTY. |  |                            |
| 050               | MATRA | TEST                  | 1.0                         | TRAINING              |                      |                  |          |                            |           |      |  | megger used several steps. |
|                   |       |                       |                             | SETUP                 |                      |                  |          |                            |           |      |  |                            |
|                   |       |                       |                             | PROCESS               |                      |                  |          |                            |           |      |  |                            |
|                   |       |                       |                             | REPORT                |                      |                  |          |                            |           |      |  |                            |
| 054               |       | TEST                  | 1.0                         | SETUP                 |                      |                  |          |                            |           |      | Ambient test, warm-up time for machine required several steps. |                            |
|                   |       |                       |                             | PROCESS               |                      |                  |          |                            |           |      |  |                            |
|                   |       |                       |                             | REPORT                |                      |                  |          |                            |           |      |  |                            |
|                   |       |                       |                             | SETUP                 |                      |                  |          |                            |           |      |  |                            |
| 205               |       | TEST                  | 1.0                         | TRAINING              |                      |                  |          |                            |           |      | adjustment of temperature required, 1 hr flow test.            |                            |
|                   |       |                       |                             | SETUP                 |                      |                  |          |                            |           |      |  |                            |
|                   |       |                       |                             | PROCESS               |                      |                  |          |                            |           |      |  |                            |
|                   |       |                       |                             | REPORT                |                      |                  |          |                            |           |      |  |                            |
| 215               |       | TEST                  | 1.0                         | TRAINING              |                      |                  |          |                            |           |      | cold test - m. st. fail at this temp - see 5-10 (hot test)     |                            |
|                   |       |                       |                             | SETUP                 |                      |                  |          |                            |           |      |  |                            |
|                   |       |                       |                             | PROCESS               |                      |                  |          |                            |           |      |  |                            |
|                   |       |                       |                             | REPORT                |                      |                  |          |                            |           |      |  |                            |
| 216               |       | INFO                  | 1.0                         | TRAINING              |                      |                  |          |                            |           |      | Note - 60% pass all (ods) and are routed to inventory.         |                            |
|                   |       |                       |                             | SETUP                 |                      |                  |          |                            |           |      |  |                            |
|                   |       |                       |                             | PROCESS               |                      |                  |          |                            |           |      |  |                            |
|                   |       |                       |                             | REPORT                |                      |                  |          |                            |           |      |  |                            |

Note: A module failure at any point in the testing

LSC-20092C



# OPERATION PROFILE

| NAME <u>Parker</u> |            | ALC <u>OC</u>         |                             | DATE <u>5/10/88</u>          |                                | RCC <u>MATPCA</u> |      | SHEET <u>3</u> OF <u>4</u> |                |                      |      |                         |     |  |
|--------------------|------------|-----------------------|-----------------------------|------------------------------|--------------------------------|-------------------|------|----------------------------|----------------|----------------------|------|-------------------------|-----|--|
| PCN <u>38645 A</u> |            | WCD <u>CAEM08</u>     |                             | WCD DATE <u>89094</u>        |                                |                   |      |                            |                |                      |      |                         |     |  |
| OPERATION NUMBER   | RCC        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE               | MANDATORY FLOW HOURS<br>% HRS. | MANPOWER          |      | EQUIPMENT                  |                | DATA SOURCE COMMENTS |      |                         |     |  |
|                    |            |                       |                             |                              |                                | SKILL CODE/LEVEL  | QTY. | TIME REQUIRED<br>% HRS.    | EQUIPMENT CODE |                      | QTY. | TIME REQUIRED<br>% HRS. |     |  |
| 217                | MAT<br>ACA | REP                   | .02                         | TRAINING<br>SLEEP<br>PROCESS | -<br>-<br>-                    | AY 10             | 1    | 1.0                        | 1.0            | BEN 20               | 1    | 1.0                     | 2.0 | 5.8 of all failed items require repair or replacement of fueling tubes, Stromboli connectors, etc. Found upon visual inspection. |
| 218                |            | TEST                  | .38                         | TRAINING<br>SLEEP<br>PROCESS | -<br>-<br>-                    |                   | 1    | 1.0                        | 1.0            | BEN 20               | 1    | 1.0                     | 1.0 | - All other failures than above involve modules (95%). This is a troubleshooting test, use ohmmeter, etc. -                      |
| 221                |            | REP                   | .10                         | TRAINING<br>SLEEP<br>PROCESS | -<br>-<br>-                    |                   | 1    | 1.0                        | 2.0            | BEN 20               | 1    | 1.0                     | 2.0 | Replacement of module A1 (25% failure) Time includes testing   |
| 222                |            | REP                   | .08                         | TRAINING<br>SLEEP<br>PROCESS | -<br>-<br>-                    |                   | 1    | 1.0                        | 2.5            | BEN 20               | 1    | 1.0                     | 2.5 | Replacement of module A2 (20% failure) Time includes testing   |
| 223                |            | REP                   | .11                         | TRAINING<br>SLEEP<br>PROCESS | -<br>-<br>-                    |                   | 1    | 1.0                        | 9.0            | BEN 20               | 1    | 1.0                     | 9.0 | Replacement of module A3 (50% failure rate) Note: this is a select fix part. (see ref.)  |

LSC-21W07C



# OPERATION PROFILE

NAME Parker ALC OC DATE 5/10/89 RCC MAT RA SHEET 4 OF 4

| PCN              |           | 38645A                |                             | WCD CAEM08     |                      | WCD DATE 89094 |                  |          |     |           |        |               |  |     |      |
|------------------|-----------|-----------------------|-----------------------------|----------------|----------------------|----------------|------------------|----------|-----|-----------|--------|---------------|--|-----|------|
| OPERATION NUMBER | RCC       | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |                | SKILL CODE/LEVEL | MANPOWER |     | EQUIPMENT |        | TIME REQUIRED | DATA SOURCE COMMENTS   |     |      |
|                  |           |                       |                             |                | %                    | HRS.           |                  | QTY.     | %   | HRS.      | QTY.   |               |  | %   | HRS. |
| 224              | MAT<br>RA | REP                   | .08                         | TRANSFER       |                      |                |                  |          |     |           |        |               | Replacement of #4 module, includes test time.<br>(20% failure)<br>S-11 S-12  |     |      |
|                  |           |                       |                             | PROCESS        | -                    | -              | AV10             | 1        | 1.0 | 3.0       | BEN 20 | 1             |  | 1.0 | 3.0  |
|                  |           |                       |                             | TRANSFER       |                      |                |                  |          |     |           |        |               |  |     |      |
| 225              |           | REP                   | .02                         | TRANSFER       |                      |                |                  |          |     |           |        |               | Replacement of module #5, including test time<br>(5% failure)<br>S-11 S-12   |     |      |
|                  |           |                       |                             | PROCESS        | -                    | -              |                  | 1        | 1.0 | 3.0       | BEN 20 | 1             |  | 1.0 | 3.0  |
|                  |           |                       |                             | TRANSFER       |                      |                |                  |          |     |           |        |               |  |     |      |
| 310              |           | ASSY                  | .40                         | TRANSFER       |                      |                |                  |          |     |           |        |               | Final assy. including ATU and oven time plus 1.0 hr coding time<br>S-11 S-12 |     |      |
|                  |           |                       |                             | PROCESS        | 1.0                  | 2.17           |                  | 1        | 1.0 | 1.25      | 4286   | 1             |  | 1.0 | 1.17 |
|                  |           |                       |                             | TRANSFER       |                      |                |                  |          |     |           |        |               |  |     |      |
| 320              |           | TEST                  | .40                         | TRANSFER       |                      |                |                  |          |     |           |        |               | Final Test. Same as ops OS, 20S, 21S combined.<br>S-11 S-12                  |     |      |
|                  |           |                       |                             | SETUP          |                      |                |                  | 1        | 1.0 | 1.13      |        |               |  |     |      |
|                  |           |                       |                             | PROCESS        | 1.0                  | 3.0            |                  | 1        | 1.0 | 3.0       | 4286   | 1             |  | 1.0 | 6.13 |
| 330              |           | PW                    | 1.0                         | TRANSFER       |                      |                |                  |          |     |           |        |               |  |     |      |
|                  |           |                       |                             | PROCESS        |                      |                |                  |          |     |           |        |               |  |     |      |
|                  |           |                       |                             | PROCESS        | -                    | -              |                  | 1        | 1.0 | 1.17      |        |               |  |     |      |



APR 20 '89 15:41 MDMSC C-17MSH ASL

F04

### FLOW PROCESS CHART

**SUBJECT**

DATE 5/10/89

**ITEM CODE**

WCD CAEM OF

WCD DATE

FS 05 Y

**PCN**

**1994**

**P/M**

38645A

## CHART BEGINS

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**CHART ENDS**

**PREPARED BY**

[illegible]

## OPERATION

## TRANSPORTATION

**▽ STORAGE**

**D DELAY**

☐ **INSPECTION**

**LSC-20147**



# OPERATION PROFILE

| NAME <u>Parker</u> |         | ALC <u>OC</u>         |                             | DATE <u>5/5/89</u> |                      | RCC <u>MAT PCA</u> |      | SHEET <u>58239</u> |      |      |                |   |      |                      |
|--------------------|---------|-----------------------|-----------------------------|--------------------|----------------------|--------------------|------|--------------------|------|------|----------------|---|------|----------------------|
| WCD <u>CAEMO3</u>  |         | WCD DATE <u>58239</u> |                             |                    |                      |                    |      |                    |      |      |                |   |      |                      |
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE     | MANDATORY FLOW HOURS |                    |      | MAIN POWER         |      |      | EQUIPMENT      |   |      | DATA SOURCE COMMENTS |
|                    |         |                       |                             |                    | %                    | HRS.               | QTY. | %                  | HRS. | QTY. | EQUIPMENT CODE | % | HRS. |                      |
| 00                 | MAT PCA | IN                    | 1.0                         | TRANSIT            | 1.0                  | 24.0               |      |                    |      |      |                |   |      |                      |
|                    |         |                       |                             | SETUP              |                      |                    |      |                    |      |      |                |   |      |                      |
|                    |         |                       |                             | PROCESS            |                      |                    |      |                    |      |      |                |   |      |                      |
|                    |         |                       |                             | TRANSIT            |                      |                    |      |                    |      |      |                |   |      |                      |
|                    |         |                       |                             | SETUP              |                      |                    |      |                    |      |      |                |   |      |                      |
|                    |         |                       |                             | PROCESS            |                      |                    |      |                    |      |      |                |   |      |                      |
|                    |         |                       |                             | TRANSIT            |                      |                    |      |                    |      |      |                |   |      |                      |
|                    |         |                       |                             | SETUP              |                      |                    |      |                    |      |      |                |   |      |                      |
|                    |         |                       |                             | PROCESS            |                      |                    |      |                    |      |      |                |   |      |                      |
|                    |         |                       |                             | TRANSIT            |                      |                    |      |                    |      |      |                |   |      |                      |
|                    |         |                       |                             | SETUP              |                      |                    |      |                    |      |      |                |   |      |                      |
|                    |         |                       |                             | PROCESS            |                      |                    |      |                    |      |      |                |   |      |                      |
|                    |         |                       |                             | TRANSIT            |                      |                    |      |                    |      |      |                |   |      |                      |
|                    |         |                       |                             | SETUP              |                      |                    |      |                    |      |      |                |   |      |                      |
|                    |         |                       |                             | PROCESS            |                      |                    |      |                    |      |      |                |   |      |                      |
|                    |         |                       |                             | TRANSIT            |                      |                    |      |                    |      |      |                |   |      |                      |
|                    |         |                       |                             | SETUP              |                      |                    |      |                    |      |      |                |   |      |                      |
|                    |         |                       |                             | PROCESS            |                      |                    |      |                    |      |      |                |   |      |                      |

\* Note: This sheet for in-out dates



# OPERATION PROFILE

NAME Carter, Phillip ALC OC DATE 5/18/89 RCC MAT PCA SHEET 1 OF 2  
 PCN 38669A WCD CAEMQ3 WCD DATE 88239

REFERENCE  
 CA. BY JARE

| OPERATION NUMBER | NCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |      | SKILL CODE/ LEVEL | MANPOWER |     | EQUIPMENT      |      | TIME REQUIRED |      | DATA SOURCE COMMENTS            |
|------------------|---------|-----------------------|-----------------------------|----------------|----------------------|------|-------------------|----------|-----|----------------|------|---------------|------|---------------------------------|
|                  |         |                       |                             |                | %                    | HRS. |                   | QTY.     | %   | EQUIPMENT CODE | QTY. | %             | HRS. |                                 |
| 010              | MAT PCA | REC                   | 1.0                         | TRANSFER       |                      |      |                   |          |     |                |      |               |      |                                 |
|                  |         |                       |                             | SETUP          |                      |      |                   |          |     |                |      |               |      |                                 |
|                  |         |                       |                             | PROCESS        | -                    |      |                   | 1        | 1.0 |                |      |               |      | 9-10<br>Reference<br>table T.O. |
| 020              |         | INFO                  | 1.0                         | TRANSFER       |                      |      |                   |          |     |                |      |               |      |                                 |
|                  |         |                       |                             | SETUP          |                      |      |                   |          |     |                |      |               |      |                                 |
|                  |         |                       |                             | PROCESS        |                      |      |                   |          |     |                |      |               |      |                                 |
| 025              |         | INFO                  | 1.0                         | TRANSFER       |                      |      |                   |          |     |                |      |               |      | MAOI 65-4                       |
|                  |         |                       |                             | SETUP          |                      |      |                   |          |     |                |      |               |      |                                 |
|                  |         |                       |                             | PROCESS        |                      |      |                   |          |     |                |      |               |      |                                 |
| 027              |         | CLN                   | 1.0                         | TRANSFER       |                      |      |                   |          |     |                |      |               |      | ad. 1 ph.                       |
|                  |         |                       |                             | SETUP          |                      |      |                   |          |     |                |      |               |      |                                 |
|                  |         |                       |                             | PROCESS        | -                    |      |                   | 1        | 1.0 | BEN 2          | 1    | 1.0           | 1.7  |                                 |
| 030              |         | INSP                  | 1.0                         | TRANSFER       |                      |      |                   |          |     |                |      |               |      |                                 |
|                  |         |                       |                             | SETUP          |                      |      |                   |          |     |                |      |               |      |                                 |
|                  |         |                       |                             | PROCESS        | -                    |      |                   | 1        | 1.0 | BEN 2          | 1    | 1.0           | 1.03 |                                 |



# OPERATION PROFILE

| NAME <u>Reker, Philip</u> ALC <u>OC</u> DATE <u>5/5/8</u> RCC <u>MAT PCA</u> SHEET <u>3</u> OF <u>7</u> |         | WCD <u>SAFE MO3</u> WCD DATE <u>88099</u> |                             |                |                                |                  |      |                         |                |      |                         |   |      |   |   |   |
|---|---------|---|-----------------------------|----------------|--------------------------------|------------------|------|-------------------------|----------------|------|-------------------------|---|------|---|---|---|
| OPERATION NUMBER  | RCC     | OPERATION DESCRIPTION                     | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS<br>% HRS. | SKILL CODE/LEVEL | QTY. | TIME REQUIRED<br>% HRS. | EQUIPMENT CODE | QTY. | TIME REQUIRED<br>% HRS. | DATA SOURCE COMMENTS  |      |   |   |   |
| 035   | MAT PCA | TEST                                      | 1.0                         | TRANSIT        | -                              | BY10             | 1    | 1.0                     | -              | -    | -                       | Continuously observed test, 3 parts.                                |      |   |   |   |
|   |         |   |                             | SETUP          | -                              |                  |      |                         |                |      |                         |   | -    | - |   |   |
|   |         |   |                             | PROCESS        | -                              |                  |      |                         |                |      |                         |   | -    | - |   |   |
| 040   | MAT PEM | MACH                                      | 1.0                         | TRANSIT        | -                              | BY10             | 1    | 1.0                     | OC4929         | 1    | 1.0                     | 9-12<br>Sent to machine shop. Normally only one machine designated. |      |   |   |   |
|   |         |   |                             | PROCESS        | 1.0                            |                  |      |                         |                |      |                         |   | 24.0 | - | - | - |
|   |         |   |                             | SETUP          | -                              |                  |      |                         |                |      |                         |   | -    | - | - |   |
| 045   | MAT PCA | DIS                                       | 1.0                         | TRANSIT        | -                              | BY10             | 1    | 1.0                     | BEN2           | 1    | 1.0                     | 9-12<br>replace parts as needed                                     |      |   |   |   |
|   |         |   |                             | PROCESS        | -                              |                  |      |                         |                |      |                         |   | -    | - | - |   |
|   |         |   |                             | SETUP          | -                              |                  |      |                         |                |      |                         |   | -    | - | - |   |
| 050   | MAT PCA | CLN                                       | 1.0                         | TRANSIT        | -                              | BY10             | 1    | 1.0                     | BEN2           | 1    | 1.0                     | 9-12<br>cleaning tank (7130)  |      |   |   |   |
|   |         |   |                             | PROCESS        | -                              |                  |      |                         |                |      |                         |   | -    | - | - |   |
|   |         |   |                             | SETUP          | -                              |                  |      |                         |                |      |                         |   | -    | - | - |   |
| 055   | MAT PCA | INSP                                      | 1.0                         | TRANSIT        | -                              | BY10             | 1    | 1.0                     | BEN32          | 1    | 1.0                     | 9-12<br>micrometer log  |      |   |   |   |
|   |         |   |                             | PROCESS        | -                              |                  |      |                         |                |      |                         |   | -    | - | - |   |
|   |         |   |                             | SETUP          | -                              |                  |      |                         |                |      |                         |   | -    | - | - |   |
|   |         |   |                             | TRANSIT        | -                              | BY10             | 1    | 1.0                     | BEN2           | 1    | 1.0                     | 9-12  |      |   |   |   |
|   |         |   |                             | PROCESS        | -                              |                  |      |                         |                |      |                         |   | -    | - | - |   |
|   |         |   |                             | SETUP          | -                              |                  |      |                         |                |      |                         |   | -    | - | - |   |



# OPERATION PROFILE

| NAME <u>Parker, Philip</u> ALC <u>OC</u> DATE <u>5/5/89</u> RCC <u>MATPCA</u> SHEET <u>3</u> OF <u>7</u> |         | WCD <u>CAEM03</u> WCD DATE <u>88039</u> |                             |                |                      |      |                  |          |     |           |        |               |      |                                       |
|--|---------|---|-----------------------------|----------------|----------------------|------|------------------|----------|-----|-----------|--------|---------------|------|---------------------------------------|
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION                   | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |      | SKILL CODE/LEVEL | MANPOWER |     | EQUIPMENT |        | TIME REQUIRED |      | DATA SOURCE COMMENTS                  |
|  |         |   |                             |                | %                    | HRS. |                  | QTY.     | %   | HRS.      | QTY.   | %             | HRS. |                                       |
| 060  | MAT PCA | TEST                                    | 1.0                         | TRANSIT        | -                    | -    | B410             | -        | -   | -         | -      | -             | -    | Test Stand: Table<br>500.<br>(TT 100) |
|  |         |   |                             | SETUP          | -                    | -    |                  | 1        | 1.0 | .08       | -      | -             | -    |                                       |
|  |         |   |                             | PROCESS        | -                    | -    |                  | 1        | 1.0 | .02       | BEN15  | 1             | 1.0  |                                       |
| 065  |         | TEST                                    | 1.0                         | TRANSIT        | -                    | -    |                  | -        | -   | -         | -      | -             | -    | SK 11 7-10                            |
|  |         |   |                             | SETUP          | -                    | -    |                  | 1        | 1.0 | .12       | -      | -             | -    |                                       |
|  |         |   |                             | PROCESS        | -                    | -    |                  | 1        | 1.0 | .03       | OC3952 | 1             | 1.0  |                                       |
| 070  |         | TEST                                    | 1.0                         | TRANSIT        | -                    | -    |                  | -        | -   | -         | -      | -             | -    | SK 11 7-10                            |
|  |         |   |                             | SETUP          | -                    | -    |                  | -        | -   | -         | -      | -             |      |                                       |
|  |         |   |                             | PROCESS        | -                    | -    |                  | 1        | 1.0 | .08       | BEN2   | 1             | 1.0  |                                       |
| 075  |         | TEST                                    | 1.0                         | TRANSIT        | -                    | -    |                  | -        | -   | -         | -      | -             | -    | SK 11 7-10                            |
|  |         |   |                             | SETUP          | -                    | -    |                  | 1        | 1.0 | .42       | -      | -             | -    |                                       |
|  |         |   |                             | PROCESS        | -                    | -    |                  | 1        | 1.0 | .05       | OC3952 | 1             | 1.0  |                                       |
| 080  |         | TEST                                    | 1.0                         | TRANSIT        | -                    | -    |                  | -        | -   | -         | -      | -             | -    | SK 11 7-10                            |
|  |         |   |                             | SETUP          | -                    | -    |                  | -        | -   | -         | -      | -             |      |                                       |
|  |         |   |                             | PROCESS        | -                    | -    |                  | 1        | 1.0 | .08       | OC4060 | 1             | 1.0  |                                       |



# OPERATION IOFILE

NAME Barker, Phillip ALC OC DATE 5/5/89 RCC MATPCA SHEET 4 OF 7

| WCD <u>CAE MQ3</u> WCD DATE <u>88039</u> |            |                          |                                   |                   |                         |      |                         |      |   |           |                   |      |                         |  |      |
|--|------------|--------------------------|-----------------------------------|-------------------|-------------------------|------|-------------------------|------|---|-----------|-------------------|------|-------------------------|--|------|
| OPERATION<br>NUMBER                      | RCC        | OPERATION<br>DESCRIPTION | MANDATORY<br>OCCURRENCE<br>FACTOR | OPERATION<br>TYPE | MANDATORY<br>FLOW HOURS |      | MANPOWER                |      |   | EQUIPMENT |                   |      | DATA SOURCE<br>COMMENTS |  |      |
|  |            |                          |                                   |                   | %                       | HRS. | SKILL<br>CODE/<br>LEVEL | QTY. | % | HRS.      | EQUIPMENT<br>CODE | QTY. |                         | %  | HRS. |
| 085                                      | MAT<br>PCA | TEST                     | 1.0                               | TRANSIT           |                         |      |                         |      |   |           |                   |      |                         | capacitor<br>analyzer and<br>MEGGAH (500V)<br>req. |      |
|  |            |                          |                                   | SETUP             |                         |      |                         |      |   |           |                   |      |                         |  |      |
|  |            |                          |                                   | PROCESS           |                         |      |                         |      |   |           |                   |      |                         |  |      |
| 090                                      |            | ASSY                     | 1.0                               | TRANSIT           |                         |      |                         |      |   |           |                   |      |                         | AS required,<br>removed and<br>replaced.           |      |
|  |            |                          |                                   | SETUP             |                         |      |                         |      |   |           |                   |      |                         |  |      |
|  |            |                          |                                   | PROCESS           |                         |      |                         |      |   |           |                   |      |                         |  |      |
| 095                                      |            | ASSY                     | 1.0                               | TRANSIT           |                         |      |                         |      |   |           |                   |      |                         |  |      |
|  |            |                          |                                   | SETUP             |                         |      |                         |      |   |           |                   |      |                         |  |      |
|  |            |                          |                                   | PROCESS           |                         |      |                         |      |   |           |                   |      |                         |  |      |
| 100                                      |            | INFO                     | 1.0                               | TRANSIT           |                         |      |                         |      |   |           |                   |      |                         |  |      |
|  |            |                          |                                   | SETUP             |                         |      |                         |      |   |           |                   |      |                         |  |      |
|  |            |                          |                                   | PROCESS           |                         |      |                         |      |   |           |                   |      |                         |  |      |
| 105                                      |            | TEST                     | 1.0                               | TRANSIT           |                         |      |                         |      |   |           |                   |      |                         | SKILL 9-10   |      |
|  |            |                          |                                   | SETUP             |                         |      |                         |      |   |           |                   |      |                         |  |      |
|  |            |                          |                                   | PROCESS           |                         |      |                         |      |   |           |                   |      |                         |  |      |



# OPERATION PROFILE

NAME Parker, Phillip ALC OC DATE 5/5/89 RCC MAT PCA SHEET 5 OF 2

| OPERATION NUMBER | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE       | MANDATORY FLOW HOURS |      | SKILL CODE/LEVEL | TIME REQUIRED |      | EQUIPMENT |                | DATA SOURCE COMMENTS |
|------------------|---------|-----------------------|-----------------------------|----------------------|----------------------|------|------------------|---------------|------|-----------|----------------|----------------------|
|                  |         |                       |                             |                      | %                    | HRS. |                  | %             | HRS. | QTY.      | EQUIPMENT CODE |                      |
| 110              | MAT PIW | WEID                  | 1.0                         | <del>TRANSPORT</del> |                      |      |                  |               |      |           |                |                      |
|                  |         |                       |                             | <del>SETUP</del>     |                      |      |                  |               |      |           |                |                      |
|                  |         |                       |                             | PROCESS              | 1.0                  | 24.0 | —                | —             | —    | —         | —              |                      |
| 115              | MAT PCA | TEST                  | 1.0                         | <del>TRANSPORT</del> |                      |      |                  |               |      |           |                |                      |
|                  |         |                       |                             | <del>SETUP</del>     |                      |      |                  |               |      |           |                |                      |
|                  |         |                       |                             | PROCESS              | —                    | —    | BY 10            | 1.0           | 1.0  | 1         | BEN 1          | 1.0 1.0              |
| 120              |         | ARC                   | 1.0                         | <del>TRANSPORT</del> |                      |      |                  |               |      |           |                |                      |
|                  |         |                       |                             | <del>SETUP</del>     |                      |      |                  |               |      |           |                |                      |
|                  |         |                       |                             | PROCESS              | 1.0                  | 4.25 |                  | 1.0           | 1.0  | 1         | OC 2.258       | 1.0 4.25             |
| 123              |         | TEST                  | 1.0                         | <del>TRANSPORT</del> |                      |      |                  |               |      |           |                |                      |
|                  |         |                       |                             | <del>SETUP</del>     |                      |      |                  |               |      |           |                |                      |
|                  |         |                       |                             | PROCESS              | —                    | —    |                  | 1.50          | 1.35 | 1         | WB 140         | 1.50 1.35            |
| 125              |         | PAINT                 | 1.0                         | <del>TRANSPORT</del> |                      |      |                  |               |      |           |                |                      |
|                  |         |                       |                             | <del>SETUP</del>     |                      |      |                  |               |      |           |                |                      |
|                  |         |                       |                             | PROCESS              | 1.0                  | 2.0  | B307             | 1.0           | 1.3  | 1         | W 59           | 1.0 1.30             |

water bath used, water bath below test temp, not as raised.

placed in oven.

two hour drying time.



# OPERATION . OFILE

| NAME <u>PARKER, Philip</u> ALC <u>OC</u> DATE <u>5/5/89</u> RCC <u>MAT PCA</u> SHEET <u>6</u> OF <u>7</u> |         |                       |                             |                |                      |          |           |      |         |                             |
|---|---------|-----------------------|-----------------------------|----------------|----------------------|----------|-----------|------|---------|-----------------------------|
| WCD <u>CAEM03</u> WCD DATE <u>88039</u>   |         |                       |                             |                |                      |          |           |      |         |                             |
| OPERATION NUMBER  | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS | MANPOWER | EQUIPMENT |      |         | DATA SOURCE COMMENTS        |
|   |         |                       |                             |                | %                    | QTY.     | %         | HRS. | QTY.    | HRS.                        |
| 130   | MAT PCA | TEST                  | 1.0                         | TRANSIT        | -                    | 1        | 1.0       | .10  | -       | -                           |
|   |         | SETUP                 |                             |                | -                    |          |           |      |         |                             |
|   |         | PROCESS               |                             |                | -                    | 1        | 1.0       | .08  | OC 4929 | 1.0 .07                     |
| 145   |         | INSP                  | 1.0                         | TRANSIT        | -                    |          |           |      |         | SK 11 4-10                  |
|   |         | SETUP                 |                             |                | -                    |          |           |      |         | INSP for correct ID on 4-10 |
|   |         | PROCESS               |                             |                | -                    | 1        | 1.0       | .08  | BEV 2   | 1.0 .08                     |
| 150   |         | PW                    | 1.0                         | TRANSIT        | -                    |          |           |      |         |                             |
|   |         | SETUP                 |                             |                | -                    |          |           |      |         |                             |
|   |         | PROCESS               |                             |                | -                    | 1        | 1.0       | .17  | -       | -                           |
| 155   |         | PW                    | 1.0                         | TRANSIT        | -                    |          |           |      |         |                             |
|   |         | SETUP                 |                             |                | -                    |          |           |      |         |                             |
|   |         | PROCESS               |                             |                | -                    | 1        | 1.0       | .02  | -       | -                           |
| 160   |         | PW                    | 1.0                         | TRANSIT        | -                    |          |           |      |         |                             |
|   |         | SETUP                 |                             |                | -                    |          |           |      |         |                             |
|   |         | PROCESS               |                             |                | -                    | 1        | 1.0       | .02  | -       | -                           |



# OPERATION PROFILE

| NAME <u>Becker, Alvin</u> ALC <u>OC</u> DATE <u>5/5/89</u> RCC <u>MATPCA</u> SHEET <u>2</u> OF <u>2</u> |            |                       |                             |                |                      |      |                  |          |   |      |                |      |   |               |  |                      |  |
|---|------------|-----------------------|-----------------------------|----------------|----------------------|------|------------------|----------|---|------|----------------|------|---|---------------|--|----------------------|--|
| PCD<br>RCC<br>38669A  |            |                       |                             |                |                      |      |                  |          |   |      |                |      |   |               |  |                      |  |
| WCD <u>CAE/M03</u> WCD DATE <u>88239</u>  |            |                       |                             |                |                      |      |                  |          |   |      |                |      |   |               |  |                      |  |
| OPERATION NUMBER  | RCC        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |      |                  | MANPOWER |   |      | EQUIPMENT      |      |   | TIME REQUIRED |  | DATA SOURCE COMMENTS |  |
|   |            |                       |                             |                | %                    | HRS. | SKILL CODE/LEVEL | QTY.     | % | HRS. | EQUIPMENT CODE | QTY. | % | HRS.          |  |                      |  |
| 165   | MAT<br>PCA | PW                    | 1.0                         | TRANSIT        |                      |      |                  |          |   |      |                |      |   |               |  |                      |  |
|   |            |                       |                             | SETUP          |                      |      |                  |          |   |      |                |      |   |               |  |                      |  |
|   |            |                       |                             | PROCESS        |                      |      |                  |          |   |      |                |      |   |               |  |                      |  |
| 9999  |            | OUT                   | 1.0                         | TRANSIT        |                      |      |                  |          |   |      |                |      |   |               |  |                      |  |
|   |            |                       |                             | SETUP          |                      |      |                  |          |   |      |                |      |   |               |  |                      |  |
|   |            |                       |                             | PROCESS        |                      |      |                  |          |   |      |                |      |   |               |  |                      |  |
|   |            |                       |                             | TRANSIT        |                      |      |                  |          |   |      |                |      |   |               |  |                      |  |
|   |            |                       |                             | SETUP          |                      |      |                  |          |   |      |                |      |   |               |  |                      |  |
|   |            |                       |                             | PROCESS        |                      |      |                  |          |   |      |                |      |   |               |  |                      |  |
|   |            |                       |                             | TRANSIT        |                      |      |                  |          |   |      |                |      |   |               |  |                      |  |
|   |            |                       |                             | SETUP          |                      |      |                  |          |   |      |                |      |   |               |  |                      |  |
|   |            |                       |                             | PROCESS        |                      |      |                  |          |   |      |                |      |   |               |  |                      |  |
|   |            |                       |                             | TRANSIT        |                      |      |                  |          |   |      |                |      |   |               |  |                      |  |
|   |            |                       |                             | SETUP          |                      |      |                  |          |   |      |                |      |   |               |  |                      |  |
|   |            |                       |                             | PROCESS        |                      |      |                  |          |   |      |                |      |   |               |  |                      |  |



## FLOW PROCESS CHART

SUBJECT \_\_\_\_\_

DATE 05/05/89

ITEM CODE

WCD CAEM03WCD DATE 68289

PCN

HOM

PIN

# 38669A

CHART BEGINS

OPN # 010

CHART ENDS

OPN #

PREPARED BY

RJP

| OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS | DESCRIPTION | OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS | DESCRIPTION |
|------------------------|----------------|---------|-------------|------------------------|----------------|---------|-------------|
| 010                    | 010            | ○□□▽    | REC         |                        |                | ○□□▽    |             |
| 020                    | 020            | ○□□▽    | INFO        |                        |                | ○□□▽    |             |
| 025                    | 025            | ○□□▽    | INFO        |                        |                | ○□□▽    |             |
| 027                    |                | ○□□▽    | CLN         |                        |                | ○□□▽    |             |
| 030                    | 030            | ○□□▽    | INSP        |                        |                | ○□□▽    |             |
| 035                    | 035            | ○□□▽    | TEST        |                        |                | ○□□▽    |             |
| 040                    | 040            | ○□□▽    | MACH        |                        |                | ○□□▽    |             |
| 045                    | 045            | ○□□▽    | DIS         |                        |                | ○□□▽    |             |
| 050                    | 050            | ○□□▽    | CLN         |                        |                | ○□□▽    |             |
| 055                    | 055            | ○□□▽    | INSP        |                        |                | ○□□▽    |             |
| 060                    | 060            | ○□□▽    | TEST        |                        |                | ○□□▽    |             |
| 065                    | 065            | ○□□▽    | TEST        |                        |                | ○□□▽    |             |
| 070                    | 070            | ○□□▽    | TEST        |                        |                | ○□□▽    |             |
| 075                    | 075            | ○□□▽    | TEST        |                        |                | ○□□▽    |             |
| 080                    | 080            | ○□□▽    | TEST        |                        |                | ○□□▽    |             |
| 085                    | 085            | ○□□▽    | TEST        |                        |                | ○□□▽    |             |
| 090                    | 090            | ○□□▽    | ASSY        |                        |                | ○□□▽    |             |
| 095                    | 095            | ○□□▽    | ASSY        |                        |                | ○□□▽    |             |
| 100                    | 100            | ○□□▽    | INFO        |                        |                | ○□□▽    |             |
| 105                    | 105            | ○□□▽    | TEST        |                        |                | ○□□▽    |             |
| 110                    | 110            | ○□□▽    | WEID        |                        |                | ○□□▽    |             |
| 115                    | 115            | ○□□▽    | TEST        |                        |                | ○□□▽    |             |
| 120                    | 120            | ○□□▽    | TEST        |                        |                | ○□□▽    |             |
| 123                    | 123            | ○□□▽    | TEST        |                        |                | ○□□▽    |             |
| 125                    | 125            | ○□□▽    | PAINT       |                        |                | ○□□▽    |             |
| 130                    | 130            | ○□□▽    | TEST        |                        |                | ○□□▽    |             |
| 145                    | 145            | ○□□▽    | INSP        |                        |                | ○□□▽    |             |
| 150                    | 150            | ○□□▽    | PW          |                        |                | ○□□▽    |             |
| 155                    | 155            | ○□□▽    | PW          |                        |                | ○□□▽    |             |
| 160                    | 160            | ○□□▽    | PW          |                        |                | ○□□▽    |             |
| 165                    | 165            | ○□□▽    | PW          |                        |                | ○□□▽    |             |
|                        |                | ○□□▽    |             |                        |                | ○□□▽    |             |

○ OPERATION

▽ STORAGE

□ INSPECTION

◇ TRANSPORTATION

D DELAY

LSC-30147



# OPERATION PROFILE

| NAME <u>Parker</u> |        | ALC <u>OC</u>         |                             | DATE <u>5/19/89</u>   |                      | ROC <u>MATPCA</u> |                  | SHEET <u>1</u> OF <u>3</u> |           |      |                |      |                      |   |
|--------------------|--------|-----------------------|-----------------------------|-----------------------|----------------------|-------------------|------------------|----------------------------|-----------|------|----------------|------|----------------------|---|
| WCD <u>38694A</u>  |        | WCD <u>SAEM09</u>     |                             | WCD DATE <u>88239</u> |                      |                   |                  |                            |           |      |                |      |                      |   |
| OPERATION NUMBER   | ROC    | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW HOURS |                   | MANPOWER         |                            | EQUIPMENT |      | TIME REQUIRED  |      | DATA SOURCE COMMENTS |   |
|                    |        |                       |                             |                       | %                    | HRS.              | SKILL CODE/LEVEL | QTY.                       | %         | HRS. | EQUIPMENT CODE | QTY. |                      | % |
| 00                 | MAT RA | IN                    | 1.0                         | TRANSIT               |                      |                   |                  |                            |           |      |                |      |                      |   |
|                    |        |                       |                             | SETUP                 |                      |                   |                  |                            |           |      |                |      |                      |   |
|                    |        |                       |                             | PROCESS               | 1.0                  | 24.0              |                  |                            |           |      |                |      |                      |   |
| 010                | MAT RA | REC                   | 1.0                         |                       |                      |                   |                  |                            |           |      |                |      |                      |   |
|                    |        |                       |                             |                       |                      |                   |                  |                            |           |      |                |      |                      |   |
|                    |        |                       |                             | PROCESS               |                      |                   |                  |                            |           |      |                |      |                      |   |
| 020                |        | INFO                  | 1.0                         |                       |                      |                   |                  |                            |           |      |                |      |                      |   |
|                    |        |                       |                             |                       |                      |                   |                  |                            |           |      |                |      |                      |   |
|                    |        |                       |                             | PROCESS               |                      |                   |                  |                            |           |      |                |      |                      |   |
| 025                |        | INSP                  | 1.0                         |                       |                      |                   |                  |                            |           |      |                |      |                      |   |
|                    |        |                       |                             |                       |                      |                   |                  |                            |           |      |                |      |                      |   |
|                    |        |                       |                             | PROCESS               |                      |                   |                  |                            |           |      |                |      |                      |   |
| 040                |        | ASSY                  | 1.0                         |                       |                      |                   |                  |                            |           |      |                |      |                      |   |
|                    |        |                       |                             |                       |                      |                   |                  |                            |           |      |                |      |                      |   |
|                    |        |                       |                             | PROCESS               |                      |                   |                  |                            |           |      |                |      |                      |   |



# OPERATION PROFILE

| NAME <u>Parker</u> |         | ALC <u>OC</u>         |                             | DATE <u>5/19/68</u>   |                      | RCC <u>MATPCA</u>     |                  | SHEET <u>2</u> OF <u>3</u> |           |      |                 |                    |                      |                |   |
|--------------------|---------|-----------------------|-----------------------------|-----------------------|----------------------|-----------------------|------------------|----------------------------|-----------|------|-----------------|--------------------|----------------------|----------------|---|
| WCD <u>CAEM09</u>  |         | WCD DATE <u>88289</u> |                             | WCD DATE <u>88289</u> |                      | WCD DATE <u>88289</u> |                  | WCD DATE <u>88289</u>      |           |      |                 |                    |                      |                |   |
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW HOURS |                       | MANPOWER         |                            | EQUIPMENT |      | TIME REQUIRED % | TIME REQUIRED HRS. | DATA SOURCE COMMENTS |                |   |
|                    |         |                       |                             |                       | %                    | HRS.                  | SKILL CODE/LEVEL | QTY.                       | %         | HRS. |                 |                    |                      | EQUIPMENT CODE | QTY.  |
| 045                | MAT PCA | DIS                   | .80                         | PROCESS               | -                    | -                     | AY10             | 1                          | 1.0       | 5    | BEN4            | 1                  | 1.0                  | .5             | 80% of all armatures are disked out and must be replaced. |
| 055                | MAT PIW | WEID                  | .80                         | PROCESS               | 1.0                  | 22.0                  | -                | -                          | -         | -    | -               | -                  | -                    | -              | SK: 11 9-10 must be sent to welding if armature removed.  |
| 065                | MAT PCA | ASSY                  | .80                         | PROCESS               | -                    | -                     | AY10             | 1                          | 1.0       | 1.0  | BEN4            | 1                  | 1.0                  | 1.0            | Rebuild armature and related assy.                        |
| 075                |         | TEST                  | 1.0                         | SETUP                 | -                    | -                     |                  |                            |           |      |                 |                    |                      |                | SK: 11 9-10   |
| 085                |         | ASSY                  | 1.0                         | PROCESS               | -                    | -                     |                  |                            |           |      |                 |                    |                      |                | SK: 11 9-10   |



# OPERATION IOFILE

|                    |     |                       |                             |                     |                                |                    |      |                            |                |      |                         |                      |
|--------------------|-----|-----------------------|-----------------------------|---------------------|--------------------------------|--------------------|------|----------------------------|----------------|------|-------------------------|----------------------|
| NAME <u>Packer</u> |     | ALC <u>OC</u>         |                             | DATE <u>5/19/89</u> |                                | RCC <u>MAT PCA</u> |      | SHEET <u>3</u> OF <u>3</u> |                |      |                         |                      |
| WCD <u>CAEM09</u>  |     | WCD DATE <u>89</u>    |                             |                     |                                |                    |      |                            |                |      |                         |                      |
| OPERATION NUMBER   | RCC | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE      | MANDATORY FLOW HOURS<br>% HRS. | SKILL CODE/LEVEL   | QTY. | TIME REQUIRED<br>% HRS.    | EQUIPMENT CODE | QTY. | TIME REQUIRED<br>% HRS. | DATA SOURCE COMMENTS |
| 095                | MAT | PW                    | 1.0                         | PROCESS             | -                              | AY10               | 1    | 1.0.25                     | -              | -    | -                       | 8-11 5-10            |
| 9999               | PCA | OUT                   | 1.0                         | TRANSIT             | -                              |                    |      |                            |                |      |                         |                      |
|                    |     |                       |                             | SETUP               | -                              |                    |      |                            |                |      |                         |                      |
|                    |     |                       |                             | PROCESS             | 1.0 0                          |                    |      |                            |                |      |                         |                      |
|                    |     |                       |                             | TRANSIT             | -                              |                    |      |                            |                |      |                         |                      |
|                    |     |                       |                             | SETUP               | -                              |                    |      |                            |                |      |                         |                      |
|                    |     |                       |                             | PROCESS             | -                              |                    |      |                            |                |      |                         |                      |
|                    |     |                       |                             | TRANSIT             | -                              |                    |      |                            |                |      |                         |                      |
|                    |     |                       |                             | SETUP               | -                              |                    |      |                            |                |      |                         |                      |
|                    |     |                       |                             | PROCESS             | -                              |                    |      |                            |                |      |                         |                      |
|                    |     |                       |                             | TRANSIT             | -                              |                    |      |                            |                |      |                         |                      |
|                    |     |                       |                             | SETUP               | -                              |                    |      |                            |                |      |                         |                      |
|                    |     |                       |                             | PROCESS             | -                              |                    |      |                            |                |      |                         |                      |
|                    |     |                       |                             | TRANSIT             | -                              |                    |      |                            |                |      |                         |                      |
|                    |     |                       |                             | SETUP               | -                              |                    |      |                            |                |      |                         |                      |
|                    |     |                       |                             | PROCESS             | -                              |                    |      |                            |                |      |                         |                      |



F04

**SUBJECT**

DATE 3/19/89

ITEM CODE  
PCH  
NON.  
PPI

WCD CAEM 09

**WCD DATE**

8829 9

38694A

## CHART BEGINS

010 -

**CHART ENDS**

095

**PREPARED BY**

[illegible]

## OPERATION

## TRANSPORTATION

**▽ STORAGE**

**D DELAY**

☐ **INSPECTION**

**LSC-20147**



# OPERATION PROFILE

NAME J Carter ALC OC DATE 5/3/89 RCC MAT RA SHEET 1 OF 1

PCN 38718A WCD CAFMO2 WCD DATE 88239

| OPERATION NUMBER | RCC | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW POINTS |      | MANPOWER         |      |   | EQUIPMENT |                |      | DATA SOURCE COMMENTS |   |      |  |  |
|------------------|-----|-----------------------|-----------------------------|----------------|-----------------------|------|------------------|------|---|-----------|----------------|------|----------------------|---|------|--|--|
|                  |     |                       |                             |                | %                     | INS. | SKILL CODE/LEVEL | QTY. | % | INS.      | EQUIPMENT CODE | QTY. |                      | % | INS. |  |  |
| 00               | RA  | IN                    | 1.0                         | TRANSIT        |                       |      |                  |      |   |           |                |      |                      |   |      |  |  |
|                  |     |                       |                             | SETUP          |                       |      |                  |      |   |           |                |      |                      |   |      |  |  |
|                  |     |                       |                             | PROCESS        |                       |      |                  |      |   |           |                |      |                      |   |      |  |  |
|                  |     |                       |                             | TRANSIT        |                       |      |                  |      |   |           |                |      |                      |   |      |  |  |
|                  |     |                       |                             | SETUP          |                       |      |                  |      |   |           |                |      |                      |   |      |  |  |
|                  |     |                       |                             | PROCESS        |                       |      |                  |      |   |           |                |      |                      |   |      |  |  |
|                  |     |                       |                             | TRANSIT        |                       |      |                  |      |   |           |                |      |                      |   |      |  |  |
|                  |     |                       |                             | SETUP          |                       |      |                  |      |   |           |                |      |                      |   |      |  |  |
|                  |     |                       |                             | PROCESS        |                       |      |                  |      |   |           |                |      |                      |   |      |  |  |
|                  |     |                       |                             | TRANSIT        |                       |      |                  |      |   |           |                |      |                      |   |      |  |  |
|                  |     |                       |                             | SETUP          |                       |      |                  |      |   |           |                |      |                      |   |      |  |  |
|                  |     |                       |                             | PROCESS        |                       |      |                  |      |   |           |                |      |                      |   |      |  |  |
|                  |     |                       |                             | TRANSIT        |                       |      |                  |      |   |           |                |      |                      |   |      |  |  |
|                  |     |                       |                             | SETUP          |                       |      |                  |      |   |           |                |      |                      |   |      |  |  |
|                  |     |                       |                             | PROCESS        |                       |      |                  |      |   |           |                |      |                      |   |      |  |  |
|                  |     |                       |                             | TRANSIT        |                       |      |                  |      |   |           |                |      |                      |   |      |  |  |
|                  |     |                       |                             | SETUP          |                       |      |                  |      |   |           |                |      |                      |   |      |  |  |
|                  |     |                       |                             | PROCESS        |                       |      |                  |      |   |           |                |      |                      |   |      |  |  |
|                  |     |                       |                             | TRANSIT        |                       |      |                  |      |   |           |                |      |                      |   |      |  |  |
|                  |     |                       |                             | SETUP          |                       |      |                  |      |   |           |                |      |                      |   |      |  |  |
|                  |     |                       |                             | PROCESS        |                       |      |                  |      |   |           |                |      |                      |   |      |  |  |

6: This sheet for IN-OUT Dates

Note: This Sheet for IN-OUT Dates



# OPERATION PROFILE

| NAME <u>LEARNER</u> ALC <u>OC PCT</u> DATE <u>5-3-82</u> RCC <u>MAT PCA</u> SHEET <u>1</u> OF <u>2</u> |         | WCD <u>CAE M02</u> WCD DATE <u>88239</u> |                             | MANPOWER       |                      | EQUIPMENT |                  | TIME REQUIRED |               | DATA SOURCE COMMENTS |                |      |               |      |                      |              |   |
|--|---------|--|-----------------------------|----------------|----------------------|-----------|------------------|---------------|---------------|----------------------|----------------|------|---------------|------|----------------------|--------------|---|
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION                    | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |           | SKILL CODE/LEVEL | QTY.          | TIME REQUIRED |                      | EQUIPMENT CODE | QTY. | TIME REQUIRED |      | DATA SOURCE COMMENTS |              |   |
|  |         |  |                             |                | %                    | HRS.      |                  |               | %             | HRS.                 |                |      | %             | HRS. |                      |              |   |
| 010  | MAT PCA | REC PH                                   | 1.00                        | TRANSIT        | -                    | -         | B4               | -             | -             | -                    | -              | -    | -             | -    | -                    |              |   |
|  |         |  |                             | SETUP          | -                    | -         | Q7               | -             | -             | -                    | -              | -    | -             | -    | -                    |              | - |
|  |         |  |                             | PROCESS        | -                    | -         | -                | -             | -             | -                    | -              | -    | -             | -    | -                    |              | - |
| 020  | PCA     | PH                                       | 1.00                        | TRANSIT        | -                    | -         | -                | -             | -             | -                    | -              | -    | -             | -    | -                    |              |   |
|  |         |  |                             | SETUP          | -                    | -         | -                | -             | -             | -                    | -              | -    | -             | -    | -                    |              | - |
|  |         |  |                             | PROCESS        | -                    | -         | -                | -             | -             | -                    | -              | -    | -             | -    | -                    |              | - |
| 025  | PCA     | PH                                       | 1.00                        | TRANSIT        | -                    | -         | -                | -             | -             | -                    | -              | -    | -             | -    | -                    |              |   |
|  |         |  |                             | SETUP          | -                    | -         | -                | -             | -             | -                    | -              | -    | -             | -    | -                    |              | - |
|  |         |  |                             | PROCESS        | -                    | -         | -                | -             | -             | -                    | -              | -    | -             | -    | -                    |              | - |
| 030  | PCA     | PROC                                     | 1.00                        | TRANSIT        | -                    | -         | -                | -             | -             | -                    | -              | -    | -             | -    | -                    | MACHINE STOP |   |
|  |         |  |                             | SETUP          | -                    | -         | -                | -             | -             | -                    | -              | -    | -             | -    | -                    |              | - |
|  |         |  |                             | PROCESS        | -                    | -         | -                | -             | -             | -                    | -              | -    | -             | -    | -                    |              | - |
|  |         |  |                             | TRANSIT        | -                    | -         | -                | -             | -             | -                    | -              | -    | -             | -    | -                    |              |   |
|  |         |  |                             | SETUP          | -                    | -         | -                | -             | -             | -                    | -              | -    | -             | -    | -                    |              | - |
|  |         |  |                             | PROCESS        | -                    | -         | -                | -             | -             | -                    | -              | -    | -             | -    | -                    |              | - |



# OPERATION PROFILE

| NAME <u>Carter</u> ALC <u>OC</u> DATE <u>5/3/88</u> RCC <u>MAT PCA</u> SHEET <u>2</u> OF <u>2</u> |            |                       |                             |                |                                |                              |      |                         |                             |      |                         |                          |    |
|---|------------|-----------------------|-----------------------------|----------------|--------------------------------|------------------------------|------|-------------------------|-----------------------------|------|-------------------------|--------------------------|----|
| WCD <u>CAEMP2</u> WCD DATE <u>88235</u>   |            |                       |                             |                |                                |                              |      |                         |                             |      |                         |                          |    |
| WCD <u>38218A</u>   |            |                       |                             |                |                                |                              |      |                         |                             |      |                         |                          |    |
| OPERATION NUMBER  | RCC        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS<br>% HRS. | MANPOWER<br>SKILL CODE/LEVEL | QTY. | TIME REQUIRED<br>% HRS. | EQUIPMENT<br>EQUIPMENT CODE | QTY. | TIME REQUIRED<br>% HRS. | DATA SOURCE COMMENTS     |    |
| A<br>035  | MAT<br>PCA | CLEAN                 | 1.0                         | TRANSFER       | —                              | B440                         | 1    | 1.0                     | 50                          | 1    | 1.0                     | DEGRASIE<br>& SAND BLAST |    |
|   |            |                       |                             | SETUP          | —                              |                              |      |                         |                             |      |                         |                          | —  |
|   |            |                       |                             | PROCESS        | —                              |                              |      |                         |                             |      |                         |                          |    |
| 040   |            | DIS                   | 1.0                         | TRANSFER       | —                              | (                            | —    | —                       | —                           | —    | —                       | COMPONANT<br>TEAR DOWN   |    |
|   |            |                       |                             | SETUP          | —                              |                              |      |                         |                             |      |                         |                          |    |
|   |            |                       |                             | PROCESS        | —                              |                              |      |                         |                             |      |                         |                          | 1  |
| 050   |            | INSP                  | 1.0                         | TRANSFER       | —                              | )                            | —    | —                       | —                           | —    | —                       | MICKES                   |    |
|   |            |                       |                             | SETUP          | —                              |                              |      |                         |                             |      |                         |                          |    |
|   |            |                       |                             | PROCESS        | —                              |                              |      |                         |                             |      |                         |                          | 1  |
| 060   | MAT<br>PC  | PROC                  | 1.0                         | TRANSFER       | —                              | —                            | —    | —                       | —                           | —    | —                       | MACHINE<br>SHOE          |    |
|   |            |                       |                             | SETUP          | —                              |                              |      |                         |                             |      |                         |                          |    |
|   |            |                       |                             | PROCESS        | 1.0                            |                              |      |                         |                             |      |                         |                          | 24 |
| 070   | MAT<br>PC  | PROC                  | 1.0                         | TRANSFER       | —                              | —                            | —    | —                       | —                           | —    | —                       | WELD                     |    |
|   |            |                       |                             | SETUP          | —                              |                              |      |                         |                             |      |                         |                          |    |
|   |            |                       |                             | PROCESS        | 1.0                            |                              |      |                         |                             |      |                         |                          | 24 |



# OPERATION PROFILE

| NAME <u>Carter</u> ALC <u>OC</u> DATE <u>5/3/89</u> RCC <u>MATPCA</u> SHEET <u>3</u> OF <u>7</u> |            | WCD <u>CAEM02</u> WCD DATE <u>882339</u> |                             |                |                                |                  |                  |                         |                        |                         |                                 |
|--|------------|--|-----------------------------|----------------|--------------------------------|------------------|------------------|-------------------------|------------------------|-------------------------|---------------------------------|
| OPERATION NUMBER   | RCC        | OPERATION DESCRIPTION                    | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS<br>% HRS. | SKILL CODE/LEVEL | MANPOWER<br>QTY. | TIME REQUIRED<br>% HRS. | EQUIPMENT<br>CODE QTY. | TIME REQUIRED<br>% HRS. | DATA SOURCE COMMENTS            |
| 090  | MAT<br>PCA | PROC                                     | 1.0                         | TRANSIT        | -                              | -                | -                | -                       | -                      | -                       | visual .150.<br>micrometer reg. |
|  |            |  |                             | SETUP          | -                              | -                | -                | -                       | -                      | -                       |                                 |
|  |            |  |                             | PROCESS        | -                              | -                | -                | -                       | -                      | -                       |                                 |
| 100  | MAT<br>PCA | TEST                                     | 1.0                         | TRANSIT        | -                              | -                | -                | -                       | -                      | -                       |                                 |
|  |            |  |                             | SETUP          | -                              | -                | -                | -                       | -                      | -                       |                                 |
|  |            |  |                             | PROCESS        | -                              | -                | -                | -                       | -                      | -                       |                                 |
| 110  | MAT<br>PCA | TEST                                     | 1.0                         | TRANSIT        | -                              | -                | -                | -                       | -                      | -                       |                                 |
|  |            |  |                             | SETUP          | -                              | -                | -                | -                       | -                      | -                       |                                 |
|  |            |  |                             | PROCESS        | -                              | -                | -                | -                       | -                      | -                       |                                 |
| 120  | MAT<br>PCA | PROC                                     | 1.0                         | TRANSIT        | -                              | -                | -                | -                       | -                      | -                       |                                 |
|  |            |  |                             | SETUP          | -                              | -                | -                | -                       | -                      | -                       |                                 |
|  |            |  |                             | PROCESS        | -                              | -                | -                | -                       | -                      | -                       |                                 |
| 130  | MAT<br>PCA | TORQUE                                   | 1.0                         | TRANSIT        | -                              | -                | -                | -                       | -                      | -                       |                                 |
|  |            |  |                             | SETUP          | -                              | -                | -                | -                       | -                      | -                       |                                 |
|  |            |  |                             | PROCESS        | -                              | -                | -                | -                       | -                      | -                       |                                 |



# OPERATION PROFILE

| NAME <u>Carter</u> ALC <u>OC</u> DATE <u>5/3/89</u> RCC <u>MAT RA</u> SHEET <u>4</u> OF <u>7</u> |         | PCN <u>38718A</u> WCD <u>CAEMD2</u> WCD DATE <u>68239</u> |                             | MANPOWER       |                        | EQUIPMENT         |      | DATA SOURCE COMMENTS |                    |              |
|--|---------|---|-----------------------------|----------------|------------------------|-------------------|------|----------------------|--------------------|--------------|
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION                                     | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS % | SKILL CODE/ LEVEL | QTY. | TIME REQUIRED %      | TIME REQUIRED HRS. |              |
| 140  | MAT RA  | PROC  | 1.0                         | TRANSIT        | —                      | BK10              | —    | —                    | 1.0                | PRESS        |
|  |         |   |                             | SETUP          | —                      |                   |      | —                    |                    |              |
|  |         |   |                             | PROCESS        | —                      |                   |      | 1.0                  |                    |              |
| 145  | MAT RA  | PROC  | 1.0                         | TRANSIT        | —                      | —                 | —    | —                    | —                  | MACHINE SHOP |
|  |         |   |                             | SETUP          | —                      |                   |      | —                    |                    |              |
|  |         |   |                             | PROCESS        | 1.0                    |                   |      | 4.0                  |                    |              |
| 150  | MAT PLW | PROC  | 1.0                         | TRANSIT        | —                      | —                 | —    | —                    | —                  | WELD SHOP    |
|  |         |   |                             | SETUP          | —                      |                   |      | —                    |                    |              |
|  |         |   |                             | PROCESS        | 1.0                    |                   |      | 2.0                  |                    |              |
| 155  | MAT RA  | Ass   | 1.0                         | TRANSIT        | —                      | BK10              | 1    | —                    | 1.0                | ADDED OPER   |
|  |         |   |                             | SETUP          | —                      |                   |      | —                    |                    |              |
|  |         |   |                             | PROCESS        | —                      |                   |      | 1.0                  |                    |              |
| 160  | MAT RA  | TEST  | 1.0                         | TRANSIT        | —                      | —                 | —    | —                    | —                  | —            |
|  |         |   |                             | SETUP          | —                      |                   |      | —                    |                    |              |
|  |         |   |                             | PROCESS        | —                      |                   |      | 1.0                  |                    |              |



# OPERATION . PROFILE

| NAME <u>Carter</u> ALC <u>OC</u> DATE <u>5/3/88</u> RCC <u>MATPCA</u> SHEET <u>5</u> OF <u>7</u> |           | WCD <u>CAEM02</u> WCD DATE <u>86239</u> |                             |                             |                                |                   |             |                         |                |             |                         |                            |
|--|-----------|---|-----------------------------|-----------------------------|--------------------------------|-------------------|-------------|-------------------------|----------------|-------------|-------------------------|----------------------------|
| OPERATION NUMBER   | RCC       | OPERATION DESCRIPTION                   | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE              | MANDATORY FLOW HOURS<br>% HRS. | SKILL CODE/ LEVEL | QTY.        | TIME REQUIRED<br>% HRS. | EQUIPMENT CODE | QTY.        | TIME REQUIRED<br>% HRS. | DATA SOURCE COMMENTS       |
| 170  | MAT<br>RA | TEST                                    | 1.0                         | TRANSIT<br>SETUP<br>PROCESS | -<br>-<br>-                    | -<br>-<br>-       | -<br>-<br>- | -<br>-<br>-             | -<br>-<br>-    | -<br>-<br>- | -<br>-<br>-             | COMBINE WITH 160           |
| 180  |           | PROC                                    | 1.0                         | TRANSIT<br>SETUP<br>PROCESS | -<br>-<br>-                    | -<br>-<br>-       | -<br>-<br>- | -<br>-<br>-             | -<br>-<br>-    | -<br>-<br>- | -<br>-<br>-             | ADDPOT 175<br>" HR<br>WELD |
| 190  |           | TEST                                    | 1.0                         | TRANSIT<br>SETUP<br>PROCESS | -<br>-<br>-                    | -<br>-<br>-       | -<br>-<br>- | -<br>-<br>-             | -<br>-<br>-    | -<br>-<br>- | -<br>-<br>-             | LEAK & PURGE               |
| 195  |           | PROC                                    | 1.0                         | TRANSIT<br>SETUP<br>PROCESS | -<br>-<br>-                    | -<br>-<br>-       | -<br>-<br>- | -<br>-<br>-             | -<br>-<br>-    | -<br>-<br>- | -<br>-<br>-             | TORQUE                     |
| 200  |           | TEST                                    | 1.0                         | TRANSIT<br>SETUP<br>PROCESS | -<br>-<br>-                    | -<br>-<br>-       | -<br>-<br>- | -<br>-<br>-             | -<br>-<br>-    | -<br>-<br>- | -<br>-<br>-             |                            |



# OPERATION PROFILE

| NAME <u>Center</u> ALC <u>OC</u> DATE <u>5/3/89</u> RCC <u>MATPCA</u> SHEET <u>6</u> OF <u>7</u> |        | WCD <u>CAEM02</u> WCD DATE <u>88239</u> |                             |                |                      |          |                |               |                      |
|--|--------|---|-----------------------------|----------------|----------------------|----------|----------------|---------------|----------------------|
| OPERATION NUMBER   | RCC    | OPERATION DESCRIPTION                   | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS | MANPOWER | EQUIPMENT      | TIME REQUIRED | DATA SOURCE COMMENTS |
|  |        |   |                             |                | %                    | QTY.     | EQUIPMENT CODE | %             |                      |
| 210  | MATPCA | TEST                                    | 1.0                         | TRANSIT        | -                    | -        | -              | -             | SPARK GAP            |
|  |        |   |                             | SETUP          | -                    | -        | -              | -             | TEST                 |
|  |        |   |                             | PROCESS        | -                    | BY 10    | 4060           | -             | NO #                 |
| 220  |        | CLEAN                                   | 1.0                         | TRANSIT        | -                    | -        | -              | -             |                      |
|  |        |   |                             | SETUP          | -                    | -        | -              | -             |                      |
|  |        |   |                             | PROCESS        | -                    | 1        | 1.05           | 1.0           |                      |
| 230  |        | PAINT                                   | 1.0                         | TRANSIT        | -                    | -        | -              | -             |                      |
|  |        |   |                             | SETUP          | -                    | -        | -              | -             |                      |
|  |        |   |                             | PROCESS        | 1.0                  | 24       | -              | -             | IN 59                |
| 240  |        | PROD                                    | 1.0                         | TRANSIT        | -                    | -        | -              | -             |                      |
|  |        |   |                             | SETUP          | -                    | -        | -              | -             |                      |
|  |        |   |                             | PROCESS        | -                    | BY 10    | 7              | 1.0           |                      |
| 250  |        | PW                                      | 1.0                         | TRANSIT        | -                    | -        | -              | -             |                      |
|  |        |   |                             | SETUP          | -                    | -        | -              | -             |                      |
|  |        |   |                             | PROCESS        | -                    | 1        | 1.05           | 1.0           |                      |



# OPERATION PROFILE

| NAME <u>Carter</u> ALC <u>OC</u> DATE <u>5/3/89</u> RCC <u>MAT PCA</u> SHEET <u>7</u> OF <u>7</u> |         | WCD <u>CAEM02</u> WCD DATE <u>88239</u> |                             |                |                      |      |                      |                |      |                      |                      |
|---|---------|---|-----------------------------|----------------|----------------------|------|----------------------|----------------|------|----------------------|----------------------|
| OPERATION NUMBER  | RCC     | OPERATION DESCRIPTION                   | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANPOWER             |      |                      | EQUIPMENT      |      |                      | DATA SOURCE COMMENTS |
|   |         |   |                             |                | MANDATORY FLOW HOURS | QTY. | TIME REQUIRED % HRS. | EQUIPMENT CODE | QTY. | TIME REQUIRED % HRS. |                      |
| 280   | MAT     | PW                                      | 1.0                         | TRANSIT        |                      |      |                      |                |      |                      |                      |
|   | SETUP   |   |                             |                |                      |      |                      |                |      |                      |                      |
|   | PROCESS |   |                             |                |                      |      |                      |                |      |                      |                      |
| 270   | PCA     | PW                                      | 1.0                         | TRANSIT        |                      |      |                      |                |      |                      |                      |
|   | SETUP   |   |                             |                |                      |      |                      |                |      |                      |                      |
|   | PROCESS |   |                             |                |                      |      |                      |                |      |                      |                      |
| 9999  |         | OUT                                     | 1.0                         | TRANSIT        |                      |      |                      |                |      |                      |                      |
|   | SETUP   |   |                             |                |                      |      |                      |                |      |                      |                      |
|   | PROCESS |   |                             |                |                      |      |                      |                |      |                      |                      |
|   |         |   |                             | TRANSIT        |                      |      |                      |                |      |                      |                      |
|   |         |   |                             | SETUP          |                      |      |                      |                |      |                      |                      |
|   |         |   |                             | PROCESS        |                      |      |                      |                |      |                      |                      |
|   |         |   |                             | TRANSIT        |                      |      |                      |                |      |                      |                      |
|   |         |   |                             | SETUP          |                      |      |                      |                |      |                      |                      |
|   |         |   |                             | PROCESS        |                      |      |                      |                |      |                      |                      |



## FLOW PROCESS CHART

SUBJECT \_\_\_\_\_

DATE 5/3/89

ITEM CODE

WCD CAEM02WCD DATE 88239

PCN

NMN

PM

38718A

CHART BEGINS 010

CHART ENDS \_\_\_\_\_

PREPARED BY P/P

| OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS | DESCRIPTION | OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS | DESCRIPTION |
|------------------------|----------------|---------|-------------|------------------------|----------------|---------|-------------|
| 010                    | 010            | ○□□□▽   | REC         |                        |                | ○□□□▽   |             |
| 020                    | 020            | ○□□□▽   | PW          |                        |                | ○□□□▽   |             |
| 025                    | —              | ○□□□▽   | PW          |                        |                | ○□□□▽   |             |
| 030                    | 030            | ○□□□▽   | PROC        |                        |                | ○□□□▽   |             |
| 035                    | —              | ○□□□▽   | CLN         |                        |                | ○□□□▽   |             |
| 040                    | 040            | ○□□□▽   | LTC         |                        |                | ○□□□▽   |             |
| 050                    | 050            | ○□□□▽   | INSP        |                        |                | ○□□□▽   |             |
| 060                    | 060            | ○□□□▽   | PROC        |                        |                | ○□□□▽   |             |
| 070                    | 070            | ○□□□▽   | PROC        |                        |                | ○□□□▽   |             |
| 080                    | 080            | ○□□□▽   | PROC        |                        |                | ○□□□▽   |             |
| 100                    | 100            | ○□□□▽   | TEST        |                        |                | ○□□□▽   |             |
| 110                    | 110            | ○□□□▽   | TEST        |                        |                | ○□□□▽   |             |
| 120                    | 120            | ○□□□▽   | PROC        |                        |                | ○□□□▽   |             |
| 130                    | 130            | ○□□□▽   | TORQUE      |                        |                | ○□□□▽   |             |
| 140                    | 140            | ○□□□▽   | PROC        |                        |                | ○□□□▽   |             |
| 145                    | 145            | ○□□□▽   | PROC        |                        |                | ○□□□▽   |             |
| 150                    | 150            | ○□□□▽   | Proc        |                        |                | ○□□□▽   |             |
| 155                    | —              | ○□□□▽   | ASSY        |                        |                | ○□□□▽   |             |
| 160                    | 160            | ○□□□▽   | TEST        |                        |                | ○□□□▽   |             |
| 170                    | 170            | ○□□□▽   | TEST        |                        |                | ○□□□▽   |             |
| 180                    | 180            | ○□□□▽   | PROC        |                        |                | ○□□□▽   |             |
| 190                    | 190            | ○□□□▽   | TEST        |                        |                | ○□□□▽   |             |
| 195                    | 195            | ○□□□▽   | PROC        |                        |                | ○□□□▽   |             |
| 200                    | 200            | ○□□□▽   | TEST        |                        |                | ○□□□▽   |             |
| 210                    | 210            | ○□□□▽   | TEST        |                        |                | ○□□□▽   |             |
| 220                    | 220            | ○□□□▽   | CLN         |                        |                | ○□□□▽   |             |
| 230                    | 230            | ○□□□▽   | PAINT       |                        |                | ○□□□▽   |             |
| 240                    | 240            | ○□□□▽   | PROC        |                        |                | ○□□□▽   |             |
| 250                    | 250            | ○□□□▽   | PW          |                        |                | ○□□□▽   |             |
| 260                    | 260            | ○□□□▽   | PW          |                        |                | ○□□□▽   |             |
| 270                    | 270            | ○□□□▽   | PW          |                        |                | ○□□□▽   |             |
|                        |                | ○□□□▽   |             |                        |                | ○□□□▽   |             |

○ OPERATION

▽ STORAGE

□ INSPECTION

◇ TRANSPORTATION

D DELAY

LSC-20147



# OPERATION PROFILE

| NAME <u>Packer</u> |         | ALC <u>OC</u>         |                             | DATE <u>5/E/89</u>    |                        | RCC <u>NAT PCA</u> |      | SHEET <u>2</u> OF <u>2</u> |                 |      |                 |                      |  |
|--------------------|---------|-----------------------|-----------------------------|-----------------------|------------------------|--------------------|------|----------------------------|-----------------|------|-----------------|----------------------|--|
| PCN <u>49211A</u>  |         | WCD <u>CAEQ2</u>      |                             | WCD DATE <u>89045</u> |                        |                    |      |                            |                 |      |                 |                      |  |
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW HOURS % | MANPOWER           |      |                            | EQUIPMENT       |      |                 | DATA SOURCE COMMENTS |  |
|                    |         |                       |                             |                       |                        | SKILL CODE/LEVEL   | QTY. | TIME REQUIRED %            | TIME REQUIRED % | QTY. | TIME REQUIRED % |                      |  |
| 1.0                | NAT PCA | IN                    | 1.0                         | TRANSIT               | 1.0 24.0               |                    |      |                            |                 |      |                 |                      |  |
|                    |         |                       |                             | SETUP                 |                        |                    |      |                            |                 |      |                 |                      |  |
|                    |         |                       |                             | PROCESS               |                        |                    |      |                            |                 |      |                 |                      |  |
|                    |         |                       |                             | TRANSIT               |                        |                    |      |                            |                 |      |                 |                      |  |
|                    |         |                       |                             | SETUP                 |                        |                    |      |                            |                 |      |                 |                      |  |
|                    |         |                       |                             | PROCESS               |                        |                    |      |                            |                 |      |                 |                      |  |
|                    |         |                       |                             | TRANSIT               |                        |                    |      |                            |                 |      |                 |                      |  |
|                    |         |                       |                             | SETUP                 |                        |                    |      |                            |                 |      |                 |                      |  |
|                    |         |                       |                             | PROCESS               |                        |                    |      |                            |                 |      |                 |                      |  |
|                    |         |                       |                             | TRANSIT               |                        |                    |      |                            |                 |      |                 |                      |  |
|                    |         |                       |                             | SETUP                 |                        |                    |      |                            |                 |      |                 |                      |  |
|                    |         |                       |                             | PROCESS               |                        |                    |      |                            |                 |      |                 |                      |  |
|                    |         |                       |                             | TRANSIT               |                        |                    |      |                            |                 |      |                 |                      |  |
|                    |         |                       |                             | SETUP                 |                        |                    |      |                            |                 |      |                 |                      |  |
|                    |         |                       |                             | PROCESS               |                        |                    |      |                            |                 |      |                 |                      |  |

NOTE: This sheet for IN-OUT DATES



| NAME <u>Packer</u> |                       |                       |                             |  |                      | ALC <u>OC</u> |          | DATE <u>5/8/89</u> |                       | RCC <u>MAT PCA</u> |                 | SHEET <u>1</u> OF <u>10</u> |  |
|--------------------|-----------------------|-----------------------|-----------------------------|--|----------------------|---------------|----------|--------------------|-----------------------|--------------------|-----------------|-----------------------------|--|
| PCN<br>NSM<br>PM   |                       |                       | <u>49711A</u>               |  | WCD <u>CAEC07</u>    |               |          |                    | WCD DATE <u>F909B</u> |                    |                 |                             |  |
| OPERATION NUMBER   | RCC                   | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE                         | MANDATORY FLOW HOURS |               | MANPOWER |                    | EQUIPMENT             |                    | TIME REQUIRED % | HRS.                        |  |
|                    |                       |                       |                             |  | %                    | HRS.          | QTY.     | SKILL CODE/LEVEL   | EQUIPMENT CODE        | QTY.               |                 |                             |  |
| 010                | <del>MAT</del><br>PCA | REC                   | 1.0                         | TARRANT<br><del>SETUP</del><br>PROCESS | -                    | -             | BY 10    | 1                  | 1.0 .03               | BENZ               | 1               | 2.0 .03                     | SP-11 9-10   |
| 015                | {                     | INFO                  | 1.0                         | TARRANT<br><del>SETUP</del><br>PROCESS | {                    | {             | {        | {                  | {                     | {                  | {               | {                           | SP-11 9-10   |
|                    |                       |                       |                             |  |                      |               |          |                    |                       |                    |                 |                             |  |
|                    |                       |                       |                             |  |                      |               |          |                    |                       |                    |                 |                             |  |
|                    |                       |                       |                             |  |                      |               |          |                    |                       |                    |                 |                             |  |
| 018                | {                     | TEST                  | 1.0                         | TARRANT<br><del>SETUP</del><br>PROCESS | {                    | {             | {        | {                  | {                     | {                  | {               | {                           | as per T.O.<br>if it's good<br>and make the<br>of that, leave<br>it as is<br>SOS new fa. |
|                    |                       |                       |                             |  |                      |               |          |                    |                       |                    |                 |                             |  |
|                    |                       |                       |                             |  |                      |               |          |                    |                       |                    |                 |                             |  |
|                    |                       |                       |                             |  |                      |               |          |                    |                       |                    |                 |                             |  |
| 020                | <del>MAT</del><br>PCA | MACH                  | .50                         | TARRANT<br><del>SETUP</del><br>PROCESS | 1.0                  | 24.0          | -        | -                  | -                     | -                  | -               | -                           | See MATPCA notes for info on this operation (not covered)                                |
| 030                | <del>MAT</del><br>PCA | VIS                   | .50                         | TARRANT<br><del>SETUP</del><br>PROCESS | -                    | -             | BY 10    | 1                  | 1.0 .15               | BENZ               | 1               | 1.0 .15                     | SP-11 9-10   |



# OPERATION PROFILE

NAME Parker ALC QC DATE 5/8/69 RCC MAT PCA SHEET 2 OF 10

| 49711A           |         | WCD CAEC07            |                             | WCD DATE 69098 |                      |      |                  |            |      |           |                |   |      |
|------------------|---------|-----------------------|-----------------------------|----------------|----------------------|------|------------------|------------|------|-----------|----------------|---|------|
| OPERATION NUMBER | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |      | SKILL CODE/LEVEL | MAIN POWER |      | EQUIPMENT |                | DATA SOURCE COMMENTS  |      |
|                  |         |                       |                             |                | %                    | HRS. |                  | QTY.       | %    | HRS.      | EQUIPMENT CODE |   | QTY. |
| 040              | MAT PCA | CLN                   | .50                         | TRANSPORT      | -                    | -    | BY10             | -          | -    | -         | -              | SK 11 5-10  |      |
|                  |         |                       |                             | SETUP          | -                    | -    |                  | -          | -    | -         | -              |   | -    |
|                  |         |                       |                             | PROCESS        | -                    | -    |                  | 1          | 1.0  | .08       | BEN 32         |   | 1    |
| 050              |         | INSP                  | .50                         | TRANSPORT      | -                    | -    |                  | -          | -    | -         | -              | SK 11 5-10  |      |
|                  |         |                       |                             | SETUP          | -                    | -    |                  | -          | -    | -         | -              |   | -    |
|                  |         |                       |                             | PROCESS        | -                    | -    |                  | 1          | 1.0  | .03       | BEN 2          |   | 1    |
| 051              |         | INSP                  | .50                         | TRANSPORT      | -                    | -    |                  | -          | -    | -         | -              | SK 11 5-10  |      |
|                  |         |                       |                             | SETUP          | -                    | -    |                  | -          | -    | -         | -              |   | -    |
|                  |         |                       |                             | PROCESS        | -                    | -    |                  | 1          | 1.0  | .03       | BEN 2          |   | 1    |
| 053              |         | ASSY                  | .50                         | TRANSPORT      | -                    | -    |                  | -          | -    | -         | -              | SK 11 5-10<br>Noted - Stand off   |      |
|                  |         |                       |                             | SETUP          | -                    | -    |                  | -          | -    | -         | -              |   | -    |
|                  |         |                       |                             | PROCESS        | -                    | -    |                  | 1          | 1.0  | .07       | BEN 2          |   | 1    |
| 055              | MAT PIN | WELD                  | .50                         | TRANSPORT      | -                    | -    |                  | -          | -    | -         | -              | SK 11 5-10<br>Housing to be for add. of extra strips. Note housing must must remove a (Problem w/it |      |
|                  |         |                       |                             | SETUP          | -                    | -    |                  | -          | -    | -         | -              |   | -    |
|                  |         |                       |                             | PROCESS        | -                    | -    |                  | 1.0        | 24.0 | -         | -              |   | -    |

Added - Sand & Gravel  
Housing to welding for add. of extension strips. Note: If housing must be removed must remove adapter. (Problem w/ 1/2 flares).



# OPERATION PROFILE

| NAME <u>Parker</u> ALC <u>OC</u> DATE <u>5/8/89</u> RCC <u>MATPCA</u> SHEET <u>3</u> OF <u>10</u> |         | WCD <u>CNFC07</u>     |                             | WCD DATE <u>CS085</u> |                      |                  |      |                 |                    |                |      |                 |                    |  |
|---|---------|-----------------------|-----------------------------|-----------------------|----------------------|------------------|------|-----------------|--------------------|----------------|------|-----------------|--------------------|--|
| OPERATION NUMBER  | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW HOURS | SKILL CODE/LEVEL | QTY. | TIME REQUIRED % | TIME REQUIRED HRS. | EQUIPMENT CODE | QTY. | TIME REQUIRED % | TIME REQUIRED HRS. | DATA SOURCE COMMENTS   |
| 060   | MAT PCA | TEST                  | .50                         | PROCESS               | 1.0                  | BY10             | 1    | 1.0             | 1.0                | BEN2           | 1    | 1.0             | 1.0                | SKILL 5-10<br>This opn required only 5% of the time dependent on results of opns 80 & 90 |
| 065   | MAT PCM | MACH                  | .50                         | PROCESS               | 1.0                  | 24.0             | -    | -               | -                  | -              | -    | -               | -                  | 14.5 opn required only 5% of the time dependent on results of opns 80 & 90               |
| 070   | MAT PCW | WELD                  | .03                         | PROCESS               | 1.0                  | 24.0             | -    | -               | -                  | -              | -    | -               | -                  | capacitor analyzer OC # 4060   |
| 080   | MAT PCA | TEST                  | .03                         | PROCESS               | -                    | BY10             | 1    | 1.0             | 1.0                | OC # 4060      | 1    | 1.0             | 1.0                | SKILL 5-10<br>Req 4000<br>regressor, not available. Must use test stand.                 |
| 090   | MAT PCA | TEST                  | .50                         | PROCESS               | -                    | BY10             | 1    | 1.0             | 1.0                | OC # 5507      | 1    | 1.0             | 1.0                | SKILL 5-10   |



# OPERATION PROFILE

| NAME <u>Arker</u> |         | ALC <u>OC</u>          | DATE <u>5/8/89</u>          | RCC <u>MAT PCA</u> | SHEET <u>4</u> OF <u>10</u> |                  |      |           |      |                |               |                      |      |            |
|-------------------|---------|------------------------|-----------------------------|--------------------|-----------------------------|------------------|------|-----------|------|----------------|---------------|----------------------|------|------------|
| PCN <u>49711A</u> |         | WCD <u>CAEC07</u>      |                             |                    |                             |                  |      |           |      |                |               |                      |      |            |
| WCD <u>88094</u>  |         | WCD DATE <u>8/09/4</u> |                             |                    |                             |                  |      |           |      |                |               |                      |      |            |
| OPERATION NUMBER  | RCC     | OPERATION DESCRIPTION  | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE     | MANPOWER                    |                  |      | EQUIPMENT |      |                | TIME REQUIRED | DATA SOURCE COMMENTS |      |            |
|                   |         |                        |                             |                    | MANDATORY FLOW HOURS        | SKILL CODE/LEVEL | QTY. | %         | HRS. | EQUIPMENT CODE |               |                      | QTY. | %          |
| 100               | MAT PCA | TEST                   | .50                         | TRANSFER           | -                           | BY10             | 1    | 1.0       | .02  | BENZ           | 1             | 1.0                  | .02  | SKILL 9-10 |
|                   |         |                        |                             | SETUP              |                             |                  |      |           |      |                |               |                      |      |            |
|                   |         |                        |                             | PROCESS            |                             |                  |      |           |      |                |               |                      |      |            |
| 110               | PCA     | TEST                   | .50                         | TRANSFER           | -                           | -                | 1    | 1.0       | .02  | BENZ           | 1             | 1.0                  | .02  | SKILL 9-10 |
|                   |         |                        |                             | SETUP              |                             |                  |      |           |      |                |               |                      |      |            |
|                   |         |                        |                             | PROCESS            |                             |                  |      |           |      |                |               |                      |      |            |
| 120               | PCA     | TEST                   | .50                         | TRANSFER           | -                           | -                | 1    | 1.0       | .08  | -              | -             | -                    | -    | SKILL 9-10 |
|                   |         |                        |                             | SETUP              |                             |                  |      |           |      |                |               |                      |      |            |
|                   |         |                        |                             | PROCESS            |                             |                  |      |           |      |                |               |                      |      |            |
| 130               | PCA     | TEST                   | .50                         | TRANSFER           | -                           | -                | 1    | 1.0       | .08  | 4060           | 1             | 1.0                  | .16  | SKILL 9-10 |
|                   |         |                        |                             | SETUP              |                             |                  |      |           |      |                |               |                      |      |            |
|                   |         |                        |                             | PROCESS            |                             |                  |      |           |      |                |               |                      |      |            |
| 140               | PCA     | TEST                   | .50                         | TRANSFER           | -                           | -                | 1    | 1.0       | .08  | BENZ           | 1             | 1.0                  | .08  | SKILL 9-10 |
|                   |         |                        |                             | SETUP              |                             |                  |      |           |      |                |               |                      |      |            |
|                   |         |                        |                             | PROCESS            |                             |                  |      |           |      |                |               |                      |      |            |



# OPERATION PROFILE

| NAME <u>Parker</u> |      | ALC <u>OC</u>         |                             | DATE <u>5/8/89</u>    |                      | RCC <u>MAT PCA</u>    |          | SHEET <u>5</u> OF <u>10</u> |           |      |               |     |                      |   |
|--------------------|------|-----------------------|-----------------------------|-----------------------|----------------------|-----------------------|----------|-----------------------------|-----------|------|---------------|-----|----------------------|---|
| WCD <u>CAEC07</u>  |      | WCD DATE <u>89099</u> |                             | WCD DATE <u>89099</u> |                      | WCD DATE <u>89099</u> |          | WCD DATE <u>89099</u>       |           |      |               |     |                      |   |
| OPERATION NUMBER   | RCC  | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW HOURS |                       | MANPOWER |                             | EQUIPMENT |      | TIME REQUIRED |     | DATA SOURCE COMMENTS |   |
|                    |      |                       |                             |                       | %                    | HRS.                  | QTY.     | SKILL CODE/LEVEL            | %         | HRS. | QTY.          | %   |                      | HRS.  |
| 150                | PCA  | TEST                  | .50                         | PROCESS               | -                    | -                     | 1        | B410                        | 1.0       | .08  | 1             | 1.0 | .08                  |   |
| 160                |      | TEST                  | .50                         | PROCESS               | -                    | -                     | 1        | BEN2                        | 1.0       | .08  | 1             | 1.0 | .08                  | SKILL 9-10  |
| 170                | DIS  | TEST                  | .50                         | PROCESS               | 1.0                  | 24.0                  | 1        | 2758                        | 1.0       | .80  | 1             | 1.0 | 11.5                 | capacitor repaired in unit. Must be placed in unit. |
| 175                | TEST | TEST                  | .50                         | PROCESS               | -                    | -                     | 1        | 4060                        | 1.0       | .08  | 1             | 1.0 | .16                  | SKILL 9-10  |
| 180                | TEST | TEST                  | .50                         | PROCESS               | -                    | -                     | 1        | 4060                        | 1.0       | .08  | 1             | 1.0 | .20                  | SKILL 9-10  |



# OPERATION PROFILE

NAME Parker ALC OC DATE 5/8/89 RCC MAT PCA SHEET 6 OF 10

| OPERATION NUMBER | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE   | MANPOWER         |      |     | EQUIPMENT |                |      | TIME REQUIRED |      | DATA SOURCE COMMENTS  |
|------------------|---------|-----------------------|-----------------------------|------------------|------------------|------|-----|-----------|----------------|------|---------------|------|---|
|                  |         |                       |                             |                  | SKILL CODE/LEVEL | QTY. | %   | HRS.      | EQUIPMENT CODE | QTY. | %             | HRS. |   |
| 190              | MAT PCA | TEST                  | .50                         | <del>TEST</del>  |                  |      |     |           |                |      |               |      | SPARK 90P<br>OC # 3906  |
|                  |         |                       |                             | SETUP            |                  | 1    | 1.0 | .03       |                |      |               |      |   |
|                  |         |                       |                             | PROCESS          |                  | 1    | 1.0 | .02       | 3906           | 1    | 1.0           | .05  |   |
| 195              |         | TEST                  | .50                         | <del>TEST</del>  |                  |      |     |           |                |      |               |      | SKILL 9-10  |
|                  |         |                       |                             | SETUP            |                  | 1    | 1.0 | .02       |                |      |               |      |   |
|                  |         |                       |                             | PROCESS          |                  | 1    | 1.0 | .02       | GEN15          | 1    | 1.0           | .04  |   |
| 200              |         | TEST                  | .50                         | <del>TEST</del>  |                  |      |     |           |                |      |               |      | SKILL 9-10  |
|                  |         |                       |                             | <del>SETUP</del> |                  |      |     |           |                |      |               |      |   |
|                  |         |                       |                             | PROCESS          |                  | 1    | 1.0 | .02       | BEN2           | 1    | 1.0           | .02  |   |
| 203              |         | TEST                  | .50                         | <del>TEST</del>  |                  |      |     |           |                |      |               |      | Adapted to test<br>had no back<br>of 70.5%<br>90P.              |
|                  |         |                       |                             | SETUP            |                  | 1    | 1.0 | .02       |                |      |               |      |   |
|                  |         |                       |                             | PROCESS          |                  | 1    | 1.0 | .08       | OC # 3953      | 1    | 1.0           | .10  |   |
| 205              | MAT PCM | MACH                  | .35                         | <del>TEST</del>  |                  |      |     |           |                |      |               |      | SKILL 9-10<br>all the back<br>and in back.<br>70% Failure rate. |
|                  |         |                       |                             | <del>SETUP</del> |                  |      |     |           |                |      |               |      |   |
|                  |         |                       |                             | PROCESS          |                  |      |     |           |                |      |               |      |   |
|                  |         |                       | 1.0                         | 24.0             |                  |      |     |           |                |      |               |      |   |



# OPERATION PROFILE

| NAME <u>Parker</u> ALC <u>OC</u> DATE <u>05/8/89</u> RCC <u>MIAT PCA</u> SHEET <u>2</u> OF <u>10</u> |         | WCD <u>CAFC07</u> WCD DATE <u>89095</u> |                             |                |                                |                  |      |                         |                |      |                         |   |
|--|---------|---|-----------------------------|----------------|--------------------------------|------------------|------|-------------------------|----------------|------|-------------------------|---|
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION                   | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS<br>% HRS. | SKILL CODE/LEVEL | QTY. | TIME REQUIRED<br>% HRS. | EQUIPMENT CODE | QTY. | TIME REQUIRED<br>% HRS. | DATA SOURCE COMMENTS                        |
| 207  | MAT PCA | PROC                                    | .35                         | PROCESS        | 1.0 1.0                        | BY10             | 1    | 1.0 .07                 | BEN2           | 1    | 1.0 .07                 | SK.11 9-10                                  |
| 208  | MAT PIN | WEID                                    | .35                         | PROCESS        | 1.0 2.40                       |                  |      |                         |                |      |                         |   |
| 209  | MAT PCA | TEST                                    | .50                         | SETUP          | 1.0 1.0                        | BY10             | 1    | 1.0 .05                 |                |      |                         | TESTED d.c.<br>1.0 sign.<br>f./b/c info     |
| 210  |         | ASSY                                    | .50                         | PROCESS        | 1.0 1.0                        |                  | 1    | 1.0 .03                 | OC #4060       | 1    | 1.0 .08                 | SK.11 9-10<br>Report and replace<br>AS APP. |
| 230  |         | ASSY                                    | .50                         | PROCESS        | 1.0 1.0                        |                  | 1    | 1.0 .50                 | BEN2           | 1    | 1.0 .50                 | SK.11 9-10                                  |



# OPERATION PROFILE

| NAME <u>Parker</u> ALC <u>OC</u> DATE <u>5/8/89</u> RCC <u>MAT/ALA</u> SHEET <u>8</u> OF <u>10</u> |         | WCD <u>CAEC07</u>     |                             | WCD DATE <u>85094</u> |                      | EQUIPMENT        |      | DATA SOURCE COMMENTS |                    |                 |
|--|---------|-----------------------|-----------------------------|-----------------------|----------------------|------------------|------|----------------------|--------------------|-----------------|
| OPERATION NUMBER   | NCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW HOURS | SKILL CODE/LEVEL | QTY. | TIME REQUIRED %      | TIME REQUIRED HRS. |                 |
| 240  | MAT KA  | PROC                  | .50                         | THROUGHPUT            | 1.0 4.75             | BV10             | 1    | 1.0 .05              | 1.0 4.75           | opening in oven |
| 250  |         | PROC                  | .50                         | THROUGHPUT            | 1.0 4.75             |                  | 1    | 1.0 .10              | 1.0 4.75           | fill with resin |
| 260  |         | PROC                  | .50                         | THROUGHPUT            | 1.0 4.75             |                  | 1    | 1.0 .18              | 1.0 .18            | SKILL 9-10      |
| 265  |         | Test                  | .50                         | THROUGHPUT            | 1.0 4.75             |                  | 1    | 1.0 .05              | 1.0 4.75           | opening in oven |
| 270  | MAT PIW | WEID                  | .50                         | THROUGHPUT            | 1.0 4.75             |                  | 1    | 1.0 .03              | 1.0 .06            | SKILL 9-10      |



# OPERATION PROFILE

| NAME <u>Packer</u> |         | ALC <u>OS</u>          | DATE <u>5/8/89</u>          | RCC <u>MAT PCA</u> | SHEET <u>9</u> OF <u>10</u>    |                  |      |                         |                |      |                         |  |
|--------------------|---------|------------------------|-----------------------------|--------------------|--------------------------------|------------------|------|-------------------------|----------------|------|-------------------------|--|
| WCD <u>CAECO2</u>  |         | WCD DATE <u>890913</u> |                             |                    |                                |                  |      |                         |                |      |                         |  |
| WCD <u>49211A</u>  |         | WCD DATE <u>890913</u> |                             |                    |                                |                  |      |                         |                |      |                         |  |
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION  | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE     | MANDATORY FLOW HOURS<br>% HRS. | SKILL CODE/LEVEL | QTY. | TIME REQUIRED<br>% HRS. | EQUIPMENT CODE | QTY. | TIME REQUIRED<br>% HRS. | DATA SOURCE COMMENTS   |
| 225                | MAT PCA | PROC                   | .50                         | PROCESS            | 1.0 .5                         | BY10             | 1    | 1.0 .02                 | OC# 2758       | 1    | 1.0 .5                  | over<br>apply vacuum<br>and heat.<br>Skill 5-10                                      |
| 300                |         | PROC                   | .50                         | PROCESS            | 1.0 3.0                        |                  | 1    | 1.0 .02                 | OC# 2758       | 1    | 1.0 3.0                 | vi 505 pressurized<br>and continue to<br>heat<br>Skill 9-10                          |
| 305                |         | TEST                   | .50                         | PROCESS            |                                |                  |      |                         |                |      |                         | Test before paint.<br>TF done after air<br>test fails, must seal<br>blast paint off. |
| 310                |         | PAINT                  | .50                         | PROCESS            |                                |                  | 1    | 1.0 .03                 | BEN17          | 1    | 1.0 .03                 | Paint plus primer.<br>2 hr. drying time<br>Skill 9-10                                |
| 340                |         | TEST                   | .50                         | PROCESS            | 1.0 2.0                        | B307             | 1    | 1.0 .30                 | W852           | 1    | 1.0 .30                 | Skill 9-10<br>diameter req.  |
|                    |         |                        |                             |                    |                                |                  | 1    | 1.0 .03                 | BEN            | 1    | 1.0 .03                 | Skill 9-10   |



# OPERATION PROFILE

| NAME <u>Parker</u> |         | ALC <u>OC</u>         |                             | DATE <u>05/08/89</u>   |                        | RCC <u>MAT PCA</u> |      | SHEET <u>10</u> OF <u>10</u> |                    |                      |                |      |                 |                    |   |            |
|--------------------|---------|-----------------------|-----------------------------|------------------------|------------------------|--------------------|------|------------------------------|--------------------|----------------------|----------------|------|-----------------|--------------------|---|------------|
| PCN <u>49711A</u>  |         | WCD <u>CAEC02</u>     |                             | WCD DATE <u>890898</u> |                        |                    |      |                              |                    |                      |                |      |                 |                    |   |            |
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE         | MANDATORY FLOW HOURS % | MANPOWER           |      | EQUIPMENT                    |                    | DATA SOURCE COMMENTS |                |      |                 |                    |   |            |
|                    |         |                       |                             |                        |                        | SKILL CODE/LEVEL   | QTY. | TIME REQUIRED %              | TIME REQUIRED HRS. |                      | EQUIPMENT CODE | QTY. | TIME REQUIRED % | TIME REQUIRED HRS. |   |            |
| 350                | MAT PCA | TEST                  | 1.0                         | SETUP                  | -                      | BY 10              | 1    | 1.0                          | .03                | -                    | -              | -    | -               | -                  | - | -          |
|                    |         | PROCESS               | -                           |                        | -                      |                    | 1    | 1.0                          | .03                | 3906                 | 1              | 1.0  | .06             | -                  | - | SKILL 5-10 |
| 360                |         | PW                    | 1.0                         | PROCESS                | -                      |                    | 1    | 1.0                          | .17                | -                    | -              | -    | -               | -                  | - | SKILL 9-10 |
| 370                |         | PW                    | 1.0                         | PROCESS                | -                      |                    | 1    | 1.0                          | .02                | -                    | -              | -    | -               | -                  | - | SKILL 9-10 |
| 380                |         | PW                    | 1.0                         | PROCESS                | -                      |                    | 1    | 1.0                          | .02                | -                    | -              | -    | -               | -                  | - | SKILL 9-10 |
| 385                |         | PW                    | 1.0                         | PROCESS                | -                      |                    | 1    | 1.0                          | .02                | -                    | -              | -    | -               | -                  | - | SKILL 9-10 |
| 9999               |         | out                   | 1.0                         | Process                | 1.0                    |                    | 1    | 1.0                          | .02                | -                    | -              | -    | -               | -                  | - | SKILL 9-10 |



## FLOW PROCESS CHART

SUBJECT

DATE 05/02/89

ITEM CODE  
PCN  
NON.  
PM

WCD CAEC07

WCD DATE

89095

49711A

CHART BEGINS

010

CHART ENDS

385

PREPARED BY

| OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS | DESCRIPTION | OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS | DESCRIPTION |
|------------------------|----------------|---------|-------------|------------------------|----------------|---------|-------------|
| 010                    | 010            | □□□□▽   | REC         | 209                    | —              | □□□□▽   | TEST        |
| 015                    | 015            | □□□□▽   | INFO        | 210                    | 210            | □□□□▽   | ASSY        |
| 018                    | —              | □□□□▽   | TEST        | 230                    | 230            | □□□□▽   | ASSY        |
| 020                    | 020            | □□□□▽   | MACH        | 240                    | 240            | □□□□▽   | PROC        |
| 030                    | 030            | □□□□▽   | DIS         | 250                    | 250            | □□□□▽   | PROC        |
| 040                    | 040            | □□□□▽   | CIN         | 260                    | 260            | □□□□▽   | PROC        |
| 050                    | 050            | □□□□▽   | INSP        | 265                    | —              | □□□□▽   | TEST        |
| 051                    | 051            | □□□□▽   | INSP        | 270                    | 270            | □□□□▽   | WEID        |
| 053                    | —              | □□□□▽   | ASSY        | 275                    | —              | □□□□▽   | PROC        |
| 055                    | 055            | □□□□▽   | WEID        | 300                    | 300            | □□□□▽   | PROC        |
| 060                    | 060            | □□□□▽   | TEST        | 305                    | —              | □□□□▽   | TEST        |
| 065                    | —              | □□□□▽   | MACH        | 310                    | 310            | □□□□▽   | Paint       |
| 070                    | 070            | □□□□▽   | WEID        | 340                    | 340            | □□□□▽   | TEST        |
| 080                    | 080            | □□□□▽   | TEST        | 350                    | 350            | □□□□▽   | TEST        |
| 090                    | 090            | □□□□▽   | TEST        | 360                    | 360            | □□□□▽   | PW          |
| 100                    | 100            | □□□□▽   | TEST        | 370                    | 370            | □□□□▽   | PW          |
| 110                    | 110            | □□□□▽   | TEST        | 380                    | 380            | □□□□▽   | PW          |
| 120                    | 120            | □□□□▽   | TEST        | 385                    | 385            | □□□□▽   | PW          |
| 130                    | 130            | □□□□▽   | TEST        |                        |                | □□□□▽   |             |
| 140                    | 140            | □□□□▽   | TEST        |                        |                | □□□□▽   |             |
| 150                    | 150            | □□□□▽   | TEST        |                        |                | □□□□▽   |             |
| 160                    | 160            | □□□□▽   | TEST        |                        |                | □□□□▽   |             |
| 170                    | 170            | □□□□▽   | DIS         |                        |                | □□□□▽   |             |
| 175                    | —              | □□□□▽   | TEST        |                        |                | □□□□▽   |             |
| 180                    | 180            | □□□□▽   | TEST        |                        |                | □□□□▽   |             |
| 190                    | 190            | □□□□▽   | TEST        |                        |                | □□□□▽   |             |
| 195                    | 195            | □□□□▽   | TEST        |                        |                | □□□□▽   |             |
| 200                    | 200            | □□□□▽   | TEST        |                        |                | □□□□▽   |             |
| 203                    | —              | □□□□▽   | TEST        |                        |                | □□□□▽   |             |
| 205                    | —              | □□□□▽   | MACH        |                        |                | □□□□▽   |             |
| 207                    | —              | □□□□▽   | PROC        |                        |                | □□□□▽   |             |
| 208                    | —              | □□□□▽   | WEID        |                        |                | □□□□▽   |             |

○ OPERATION

▽ STORAGE

□ INSPECTION

◇ TRANSPORTATION

D DELAY

LSC-20147



# OPERATION PROFILE

NAME Packer ALC OC DATE 5/09/89 RCC MAT PCA SHEET 2 OF 2

PCN 5008 A WCD SAE305 WCD DATE 88209

| OPERATION NUMBER | RCC    | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS<br>% HRS. | MANPOWER         |      |   | EQUIPMENT |                |      | TIME REQUIRED |      | DATA SOURCE COMMENTS |
|------------------|--------|-----------------------|-----------------------------|----------------|--------------------------------|------------------|------|---|-----------|----------------|------|---------------|------|----------------------|
|                  |        |                       |                             |                |                                | SKILL CODE/LEVEL | QTY. | % | HRS.      | EQUIPMENT CODE | QTY. | %             | HRS. |                      |
| 00               | MAT RA | IN                    | 1.0                         | TRANSIT        |                                |                  |      |   |           |                |      |               |      |                      |
|                  |        |                       |                             | SETUP          |                                |                  |      |   |           |                |      |               |      |                      |
|                  |        |                       |                             | PROCESS        | 1.0/1.0                        |                  |      |   |           |                |      |               |      |                      |
|                  |        |                       |                             | TRANSIT        |                                |                  |      |   |           |                |      |               |      |                      |
|                  |        |                       |                             | SETUP          |                                |                  |      |   |           |                |      |               |      |                      |
|                  |        |                       |                             | PROCESS        |                                |                  |      |   |           |                |      |               |      |                      |
|                  |        |                       |                             | TRANSIT        |                                |                  |      |   |           |                |      |               |      |                      |
|                  |        |                       |                             | SETUP          |                                |                  |      |   |           |                |      |               |      |                      |
|                  |        |                       |                             | PROCESS        |                                |                  |      |   |           |                |      |               |      |                      |
|                  |        |                       |                             | TRANSIT        |                                |                  |      |   |           |                |      |               |      |                      |
|                  |        |                       |                             | SETUP          |                                |                  |      |   |           |                |      |               |      |                      |
|                  |        |                       |                             | PROCESS        |                                |                  |      |   |           |                |      |               |      |                      |
|                  |        |                       |                             | TRANSIT        |                                |                  |      |   |           |                |      |               |      |                      |
|                  |        |                       |                             | SETUP          |                                |                  |      |   |           |                |      |               |      |                      |
|                  |        |                       |                             | PROCESS        |                                |                  |      |   |           |                |      |               |      |                      |

NOTE: THIS SHEET FOR IN-OUT DATES



# OPERATION PROFILE

NAME Arbor ALC 2 DATE 9 RCC 820 SHEET 1 OF 6

| WCD 52028A WCD DATE 820 |     |                       |                             |                |                      |      |       |                  |      |               |        |                |      |               |            |   |            |
|-------------------------|-----|-----------------------|-----------------------------|----------------|----------------------|------|-------|------------------|------|---------------|--------|----------------|------|---------------|------------|---|------------|
| OPERATION NUMBER        | RCC | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |      |       | SKILL CODE/LEVEL | QTY. | TIME REQUIRED |        | EQUIPMENT CODE | QTY. | TIME REQUIRED |            | DATA SOURCE COMMENTS  |            |
|                         |     |                       |                             |                | %                    | HRS. | %     |                  |      | HRS.          | %      |                |      | HRS.          |            |   |            |
| 003                     | MAT | PROC                  | 1.0                         | TRANSIT        | -                    | -    |       |                  |      |               |        |                |      |               |            | Standard 6665   |            |
|                         |     |                       |                             | SETUP          | -                    | -    |       |                  |      |               |        |                |      |               |            |   |            |
|                         |     |                       |                             | PROCESS        | -                    | -    | BY 02 | 1                | 1.0  | .25           | OC3965 | 1              | 1.0  | .25           | SA 11 9-10 |   |            |
| 005                     |     | PW                    | 1.0                         | TRANSIT        | -                    | -    |       |                  |      |               |        |                |      |               |            | Doc. 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100 |            |
|                         |     |                       |                             | SETUP          | -                    | -    |       |                  |      |               |        |                |      |               |            |   |            |
|                         |     |                       |                             | PROCESS        | -                    | -    | BY 02 | 1                | 1.0  | .08           | -      | -              | -    | -             | -          |   | -          |
| 010                     |     | REC                   | 1.0                         | TRANSIT        | -                    | -    |       |                  |      |               |        |                |      |               |            | SA 11 9-10  |            |
|                         |     |                       |                             | SETUP          | -                    | -    |       |                  |      |               |        |                |      |               |            |   |            |
|                         |     |                       |                             | PROCESS        | -                    | -    |       | 1                | 1.0  | .25           | BEV4   | 1              | 1.0  | .25           | SA 11 9-10 |   |            |
| 015                     |     | INFO                  | 1.0                         | TRANSIT        | -                    | -    |       |                  |      |               |        |                |      |               |            | SA 11 9-10  |            |
|                         |     |                       |                             | SETUP          | -                    | -    |       |                  |      |               |        |                |      |               |            |   |            |
|                         |     |                       |                             | PROCESS        | -                    | -    |       | 1                | 1.0  | .08           | -      | -              | -    | -             | -          |   | SA 11 9-10 |
| 020                     |     | TEST                  | 1.0                         | TRANSIT        | -                    | -    |       |                  |      |               |        |                |      |               |            | SA 11 9-10  |            |
|                         |     |                       |                             | SETUP          | -                    | -    |       | 1                | 1.0  | .08           | -      | -              | -    | -             | -          |   | SA 11 9-10 |
|                         |     |                       |                             | PROCESS        | -                    | -    |       | 1                | 1.0  | .17           | 3906   | 1              | 1.0  | .25           | SA 11 9-10 |   |            |



# OPERATION PROFILE

| NAME <u>ALC</u> DATE <u>WCD</u> RCC <u>800</u> SHEET <u>6</u> OF <u>6</u> |     |                       |                             |                |                        |                  |      |               |      |           |      |  |
|---|-----|-----------------------|-----------------------------|----------------|------------------------|------------------|------|---------------|------|-----------|------|--|
| WCD <u>50028A</u> WCD DATE <u>800</u>                                     |     |                       |                             |                |                        |                  |      |               |      |           |      |  |
| MANPOWER  |     |                       |                             |                |                        |                  |      |               |      |           |      |  |
| OPERATION NUMBER  | RCC | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS % | SKILL CODE/LEVEL | QTY. | TIME REQUIRED |      | EQUIPMENT |      | DATA SOURCE COMMENTS                                 |
|   |     |                       |                             |                |                        |                  |      | %             | HRS. | QTY.      | HRS. |  |
| 030   | MAT | INFO                  | .10                         | PROCESS        |                        |                  |      |               |      |           |      | Repair as necessary<br>see I.D. reference            |
| 040   |     | DIS                   | .10                         | PROCESS        |                        |                  | 1    | 1.0           | .25  | BEN4      |      | SK. 11 5-10  |
| 050   |     | CLN.                  | .10                         | PROCESS        |                        |                  | 1    | 1.0           | 1.0  | BEN4      |      | SK. 11 5-10  |
| 060   |     | INSP                  | .10                         | PROCESS        |                        |                  |      |               |      |           |      | SK. 11 5-10  |
| 070   |     | TEST                  | .10                         | PROCESS        |                        |                  | 1    | 1.0           | .25  | BEN4      |      | SK. 11 5-10<br>Also use portable capacitor analyzer. |
|   |     |                       |                             | PROCESS        |                        |                  | 1    | 1.0           | .25  | 3952      |      | SK. 11 5-10  |



# OPERATION PROFILE

| NAME <u>Parker</u> ALC <u>CC</u> DATE <u>02/10/89</u> RCC <u>MAT PCA</u> SHEET <u>3</u> OF <u>6</u> |         |                       |                             |                |                    |                  |      |                 |                   |                |      |                 |                   |                      |
|---|---------|-----------------------|-----------------------------|----------------|--------------------|------------------|------|-----------------|-------------------|----------------|------|-----------------|-------------------|----------------------|
| WCD <u>CAE205</u> WCD DATE <u>88204</u>   |         |                       |                             |                |                    |                  |      |                 |                   |                |      |                 |                   |                      |
| WCD <u>5008A</u>  |         |                       |                             |                |                    |                  |      |                 |                   |                |      |                 |                   |                      |
| OPERATION NUMBER  | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HRS | SKILL CODE/LEVEL | QTY. | TIME REQUIRED % | TIME REQUIRED HRS | EQUIPMENT CODE | QTY. | TIME REQUIRED % | TIME REQUIRED HRS | DATA SOURCE COMMENTS |
| 250   | MAT PCA | ASSY                  | .10                         | PROCESS        | -                  | BY 10            | 1    | 1.0             | .25               | BEN4           | 1    | 1.0             | 20.25             | SKILL 9-10           |
| 281   |         | INSP                  | .10                         | PROCESS        | -                  |                  | 1    | 1.0             | .03               | BEN4           | 1    | 1.0             | 10.03             | SKILL 9-10           |
| 282   |         | PROC                  | .10                         | PROCESS        | 1.0                | 30               | -    | -               | -                 |                | -    | -               | -                 | SKILL 9-10           |
| 290   |         | ASSY                  | .10                         | PROCESS        | -                  |                  | 1    | 1.0             | 1.0               | BEN4           | 1    | 1.0             | 10.10             | SKILL 9-10           |
| 295   |         | PROC                  | .10                         | PROCESS        | -                  |                  | 1    | 1.0             | .50               | BEN4           | 1    | 1.0             | 50.50             | SKILL 9-10           |



# OPERATION PROFILE

| NAME <u>Black</u>                          |            | ALC <u>7C</u>         |                             | DATE <u>10/10/80</u> |                      | RCC <u>10/10/80</u> |            | SHEET <u>1</u> OF <u>6</u> |           |         |                      |     |      |            |
|--|------------|-----------------------|-----------------------------|----------------------|----------------------|---------------------|------------|----------------------------|-----------|---------|----------------------|-----|------|------------|
| WCD <u>50025 H</u> WCD DATE <u>8/20/80</u> |            |                       |                             |                      |                      |                     |            |                            |           |         |                      |     |      |            |
| OPERATION NUMBER                           | RCC        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE       | MANDATORY FLOW HOURS |                     | MAIN POWER |                            | EQUIPMENT |         | DATA SOURCE COMMENTS |     |      |            |
|  |            |                       |                             |                      | %                    | HRS.                | QTY.       | %                          | HRS.      | QTY.    |                      | %   | HRS. |            |
| 310  | PIAT<br>KA | INSP                  | .10                         | INSPECTION           | -                    | -                   | 1          | 1.0                        | .03       | GEN 17  | 1                    | 1.0 | .05  | SKILL 5-10 |
| 370  |            | PROC                  | .10                         | PROCESSING           | -                    | -                   | 1          | 1.0                        | .05       | GEN 17  | 1                    | 1.0 | .05  | (Heat)     |
| 380  |            | PROC                  | .10                         | PROCESSING           | 1.0                  | .50                 | 1          | 1.0                        | .05       | OC 2758 | 1                    | 1.0 | .55  | SKILL 5-10 |
| 390  |            | PROC                  | .10                         | PROCESSING           | 1.0                  | .40                 | 1          | 1.0                        | .02       | OC 2758 | 1                    | 1.0 | 4.2  | SKILL 5-10 |
| 400  |            | PROC                  | .10                         | PROCESSING           | -                    | -                   | 1          | 1.0                        | .03       | GEN 4   | 1                    | 1.0 | .03  | SKILL 5-10 |
| 410  |            | PROC                  | .10                         | PROCESSING           | -                    | -                   | 1          | 1.0                        | .02       | GEN 4   | 1                    | 1.0 | .02  | SKILL 5-10 |



# OPERATION PROFILE

| NAME <u>Parker</u> |            | ALC <u>CC</u>         |                             | DATE <u>05/14/89</u>     |                     | RCC <u>SWA</u>   |      | SHEET <u>5</u> OF <u>6</u> |                |      |                    |                      |                               |
|--------------------|------------|-----------------------|-----------------------------|--------------------------|---------------------|------------------|------|----------------------------|----------------|------|--------------------|----------------------|-------------------------------|
| PCN <u>50028A</u>  |            | WCD <u>CAF 205</u>    |                             | WCD DATE <u>05/14/89</u> |                     |                  |      |                            |                |      |                    |                      |                               |
| OPERATION NUMBER   | RCC        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE           | MANPOWER            |                  |      | EQUIPMENT                  |                |      | TIME REQUIRED HRS. | DATA SOURCE COMMENTS |                               |
|                    |            |                       |                             |                          | MANDATORY FLOW HRS. | SKILL CODE/LEVEL | QTY. | TIME REQUIRED %            | EQUIPMENT CODE | QTY. |                    |                      | TIME REQUIRED %               |
| 410                | <u>PCA</u> | <u>INSP</u>           | <u>.10</u>                  | <u>TRANSIT</u>           | -                   | -                | -    | -                          | -              | -    | -                  | -                    | <u>solder</u>                 |
| 420                |            | <u>TEST</u>           | <u>.10</u>                  | <u>SETUP</u>             | -                   | -                | -    | -                          | -              | -    | -                  | -                    | <u>Final Function 1 test.</u> |
| 425                |            | <u>PAINT</u>          | <u>1.0</u>                  | <u>PROCESS</u>           | -                   | -                | -    | -                          | -              | -    | -                  | -                    | <u>SK 11 5-10</u>             |
| 430                |            | <u>PW</u>             | <u>1.0</u>                  | <u>PROCESS</u>           | -                   | -                | -    | -                          | -              | -    | -                  | -                    | <u>SK 11 5-10</u>             |
| 440                |            | <u>PW</u>             | <u>1.0</u>                  | <u>PROCESS</u>           | -                   | -                | -    | -                          | -              | -    | -                  | -                    | <u>SK 11 5-10</u>             |



# OPERATION PROFILE

NAME Parker ALC OC DATE 05/ RCC MATPCA SHEET OF 6

PCN

50028A

WCD CAE205

WCD DATE 89094

| OPERATION NUMBER | RCC        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE              | MANDATORY FLOW HOURS | MANPOWER |      | SKILL CODE/LEVEL | TIME REQUIRED |      | EQUIPMENT CODE | QTY. | TIME REQUIRED |      | DATA SOURCE COMMENTS                              |
|------------------|------------|-----------------------|-----------------------------|-----------------------------|----------------------|----------|------|------------------|---------------|------|----------------|------|---------------|------|---|
|                  |            |                       |                             |                             |                      | %        | HRS. |                  | %             | HRS. |                |      | %             | HRS. |   |
| 450              | MAT<br>PCA | PW                    | 1.0                         | PROCESS                     | -                    | -        | -    | BY 10            | 1.0           | .08  | -              | -    | -             | -    | SKILL 5-10<br>Spine location<br>tasks on this 1-5 |
| 460              |            | PW                    | 1.0                         | PROCESS                     | -                    | -        | -    |                  | 1.0           | .08  | -              | -    | -             | -    | SKILL 5-10  |
| 485              |            | PW                    | 1.0                         | PROCESS                     | -                    | -        | -    |                  | 1.0           | .02  | -              | -    | -             | -    | SKILL 5-10  |
| 490              |            | PW                    | 1.0                         | PROCESS                     | -                    | -        | -    |                  | 1.0           | .08  | -              | -    | -             | -    | SKILL 5-10  |
| 4999             |            | OUT                   | 1.0                         | TRANSIT<br>SETUP<br>PROCESS | -                    | -        | -    |                  | 1.0           | .08  | -              | -    | -             | -    | SKILL 5-10  |
|                  |            |                       |                             |                             | 1.0                  | 6.0      |      |                  |               |      |                |      |               |      |   |



## FLOW PROCESS CHART

SUBJECT \_\_\_\_\_

DATE 5/5/89

ITEM CODE

PCN  
NOR.  
PM☒  
☐  
☐WCD CAEZ 05

WCD DATE

89094

500784

CHART BEGINS

003

CHART ENDS

490

PREPARED BY \_\_\_\_\_

| OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS | DESCRIPTION | OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS | DESCRIPTION |
|------------------------|----------------|---------|-------------|------------------------|----------------|---------|-------------|
| 003                    | -              | ○□□▽    | Sandblast   |                        |                | ○□□▽    |             |
| 005                    | 005            | ○□□▽    | PW          |                        |                | ○□□▽    |             |
| 010                    | 010            | ○□□▽    | REC         |                        |                | ○□□▽    |             |
| 015                    | 015            | ○□□▽    | INFO        |                        |                | ○□□▽    |             |
| 020                    | 020            | ○□□▽    | TEST        |                        |                | ○□□▽    |             |
| 030                    | 030            | ○□□▽    | INFO        |                        |                | ○□□▽    |             |
| 040                    | 040            | ○□□▽    | DIS         |                        |                | ○□□▽    |             |
| 050                    | 050            | ○□□▽    | CLN         |                        |                | ○□□▽    |             |
| 060                    | 060            | ○□□▽    | INSP        |                        |                | ○□□▽    |             |
| 070                    | 070            | ○□□▽    | TEST        |                        |                | ○□□▽    |             |
| 250                    | 250            | ○□□▽    | ASSY        |                        |                | ○□□▽    |             |
| 281                    | 281            | ○□□▽    | INSP        |                        |                | ○□□▽    |             |
| 282                    | 282            | ○□□▽    | PROC        |                        |                | ○□□▽    |             |
| 290                    | 290            | ○□□▽    | ASSY        |                        |                | ○□□▽    |             |
| 295                    | 295            | ○□□▽    | PROC        |                        |                | ○□□▽    |             |
| 310                    | 310            | ○□□▽    | INSP        |                        |                | ○□□▽    |             |
| 320                    | 320            | ○□□▽    | PROC        |                        |                | ○□□▽    |             |
| 380                    | 380            | ○□□▽    | PROC        |                        |                | ○□□▽    |             |
| 390                    | 390            | ○□□▽    | PROC        |                        |                | ○□□▽    |             |
| 400                    | 400            | ○□□▽    | PROC        |                        |                | ○□□▽    |             |
| 410                    | 410            | ○□□▽    | INSP        |                        |                | ○□□▽    |             |
| 420                    | 420            | ○□□▽    | TEST        |                        |                | ○□□▽    |             |
| 425                    | 425            | ○□□▽    | PAINT       |                        |                | ○□□▽    |             |
| 430                    | 430            | ○□□▽    | PW          |                        |                | ○□□▽    |             |
| 440                    | 440            | ○□□▽    | PW          |                        |                | ○□□▽    |             |
| 450                    | 450            | ○□□▽    | PW          |                        |                | ○□□▽    |             |
| 460                    | 460            | ○□□▽    | PW          |                        |                | ○□□▽    |             |
| 485                    | 485            | ○□□▽    | PW          |                        |                | ○□□▽    |             |
| 490                    | 490            | ○□□▽    | PW          |                        |                | ○□□▽    |             |
|                        |                | ○□□▽    |             |                        |                | ○□□▽    |             |
|                        |                | ○□□▽    |             |                        |                | ○□□▽    |             |
|                        |                | ○□□▽    |             |                        |                | ○□□▽    |             |

○ OPERATION

▽ STORAGE

□ INSPECTION

◇ TRANSPORTATION

D DELAY

LSC-20147



# OPERATION PROFILE

| NAME <u>Parker</u> |         | ALC <u>00</u>         |                             | DATE <u>5/16/89</u>   |                      | RCC <u>MAT PCA</u> |                   | SHEET <u>2</u> OF <u>2</u> |                 |                    |                |      |  |                 |                    |                      |  |  |
|--------------------|---------|-----------------------|-----------------------------|-----------------------|----------------------|--------------------|-------------------|----------------------------|-----------------|--------------------|----------------|------|--|-----------------|--------------------|----------------------|--|--|
| PCN <u>50217A</u>  |         | WCD <u>CAEA01</u>     |                             | WCD DATE <u>86121</u> |                      |                    |                   |                            |                 |                    |                |      |  |                 |                    |                      |  |  |
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW HOURS |                    |                   | MANPOWER                   |                 |                    | EQUIPMENT      |      |  | TIME REQUIRED % | TIME REQUIRED HRS. | DATA SOURCE COMMENTS |  |  |
|                    |         |                       |                             |                       | %                    | HRS.               | SKILL CODE/ LEVEL | QTY.                       | TIME REQUIRED % | TIME REQUIRED HRS. | EQUIPMENT CODE | QTY. |  |                 |                    |                      |  |  |
| 00                 | MAT PCA | IN                    | 110                         | TRANSIT               |                      |                    |                   |                            |                 |                    |                |      |  |                 |                    |                      |  |  |
|                    |         |                       |                             | SETUP                 |                      |                    |                   |                            |                 |                    |                |      |  |                 |                    |                      |  |  |
|                    |         |                       |                             | PROCESS               |                      |                    |                   |                            |                 |                    |                |      |  |                 |                    |                      |  |  |
|                    |         |                       |                             | TRANSIT               |                      |                    |                   |                            |                 |                    |                |      |  |                 |                    |                      |  |  |
|                    |         |                       |                             | SETUP                 |                      |                    |                   |                            |                 |                    |                |      |  |                 |                    |                      |  |  |
|                    |         |                       |                             | PROCESS               |                      |                    |                   |                            |                 |                    |                |      |  |                 |                    |                      |  |  |
|                    |         |                       |                             | TRANSIT               |                      |                    |                   |                            |                 |                    |                |      |  |                 |                    |                      |  |  |
|                    |         |                       |                             | SETUP                 |                      |                    |                   |                            |                 |                    |                |      |  |                 |                    |                      |  |  |
|                    |         |                       |                             | PROCESS               |                      |                    |                   |                            |                 |                    |                |      |  |                 |                    |                      |  |  |
|                    |         |                       |                             | TRANSIT               |                      |                    |                   |                            |                 |                    |                |      |  |                 |                    |                      |  |  |
|                    |         |                       |                             | SETUP                 |                      |                    |                   |                            |                 |                    |                |      |  |                 |                    |                      |  |  |
|                    |         |                       |                             | PROCESS               |                      |                    |                   |                            |                 |                    |                |      |  |                 |                    |                      |  |  |
|                    |         |                       |                             | TRANSIT               |                      |                    |                   |                            |                 |                    |                |      |  |                 |                    |                      |  |  |
|                    |         |                       |                             | SETUP                 |                      |                    |                   |                            |                 |                    |                |      |  |                 |                    |                      |  |  |
|                    |         |                       |                             | PROCESS               |                      |                    |                   |                            |                 |                    |                |      |  |                 |                    |                      |  |  |
|                    |         |                       |                             | TRANSIT               |                      |                    |                   |                            |                 |                    |                |      |  |                 |                    |                      |  |  |
|                    |         |                       |                             | SETUP                 |                      |                    |                   |                            |                 |                    |                |      |  |                 |                    |                      |  |  |
|                    |         |                       |                             | PROCESS               |                      |                    |                   |                            |                 |                    |                |      |  |                 |                    |                      |  |  |

NOTE: This sheet is for IN-OUT sheet



# OPERATION PROFILE

NAME Peiker ALC OC DATE 5/1/88 RCC MAT PCA SHEET 1 OF 4

PCN 50217A WCD CAEA01 WCD DATE 8612

| OPERATION NUMBER | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS % | MANPOWER         |      |                 | EQUIPMENT |                |      | DATA SOURCE COMMENTS |                                   |
|------------------|---------|-----------------------|-----------------------------|----------------|------------------------|------------------|------|-----------------|-----------|----------------|------|----------------------|-----------------------------------|
|                  |         |                       |                             |                |                        | SKILL CODE/LEVEL | QTY. | TIME REQUIRED % | INRS.     | EQUIPMENT CODE | QTY. |                      | TIME REQUIRED %                   |
| 010              | MAT PCA | REC                   | 1.0                         | TRANSIT        | -                      |                  |      |                 |           |                |      |                      |                                   |
|                  |         |                       |                             | SETUP          | -                      |                  |      |                 |           |                |      |                      |                                   |
|                  |         |                       |                             | PROCESS        | -                      | BY 10            | 1    | 1.0             | 0.08      | BEN 6          | 1    | 1.0                  | 0.08                              |
| 015              |         | INFO                  | 1.0                         |                | -                      |                  |      |                 |           |                |      |                      | skill 5-10                        |
|                  |         |                       |                             |                | -                      |                  |      |                 |           |                |      |                      | Applicable T.O.                   |
|                  |         |                       |                             | TRANSIT        | -                      |                  |      |                 |           |                |      |                      |                                   |
| 017              |         | PROC                  | 1.0                         | SETUP          | -                      |                  |      |                 |           |                |      |                      | Sandblast                         |
|                  |         |                       |                             | PROCESS        | -                      | BY 07            | 1    | 1.0             | 1.12      | 3565           | 1    | 1.0                  | 1.12                              |
|                  |         |                       |                             |                | -                      |                  |      |                 |           |                |      |                      | 60% failure rate.                 |
| 018              |         | TEST                  | 1.0                         | SETUP          | -                      |                  |      |                 |           |                |      |                      |                                   |
|                  |         |                       |                             | PROCESS        | -                      |                  |      |                 |           |                |      |                      |                                   |
|                  |         |                       |                             |                | -                      | BY 10            | 1    | 1.0             | 0.08      | 3806           | 1    | 1.0                  | 0.20                              |
| 020              |         | REP                   | .30                         | TRANSIT        | -                      |                  |      |                 |           |                |      |                      | skill 9-10                        |
|                  |         |                       |                             | SETUP          | -                      |                  |      |                 |           |                |      |                      | Transformer fails                 |
|                  |         |                       |                             | PROCESS        | -                      |                  |      |                 |           |                |      |                      | 50% of tests visual inspection.   |
|                  |         |                       |                             |                | -                      |                  |      |                 |           |                |      |                      | Time includes remove and replace. |
|                  |         |                       |                             | PROCESS        | -                      |                  |      |                 |           |                |      |                      | skill 9-10                        |



# OPERATION FILE

| NAME <u>Pecker</u> |         | ALC <u>OC</u>         |                             | DATE <u>5/16/89</u>   |                      | RCC <u>MATRA</u> |          | SHEET <u>3</u> OF <u>4</u> |           |        |                 |                    |                      |  |
|--------------------|---------|-----------------------|-----------------------------|-----------------------|----------------------|------------------|----------|----------------------------|-----------|--------|-----------------|--------------------|----------------------|--|
| PCN <u>5021DA</u>  |         | WCD <u>CAEA01</u>     |                             | WCD DATE <u>86198</u> |                      |                  |          |                            |           |        |                 |                    |                      |  |
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW HOURS |                  | MANPOWER |                            | EQUIPMENT |        | TIME REQUIRED % | TIME REQUIRED HRS. | DATA SOURCE COMMENTS |  |
|                    |         |                       |                             |                       | %                    | HRS.             | QTY.     | SKILL CODE/LEVEL           | %         | HRS.   |                 |                    |                      | EQUIPMENT CODE   |
| 021                | MAT PCA | TEST                  | .60                         | TEST                  | -                    | -                | 1        | 1.0                        | 33        | -      | -               | -                  | -                    | Tube assy. are defective in approx. 50% of all items failing test.                   |
| 022                |         | REP                   | .30                         | PROCESS               | -                    | -                | 1        | 1.0                        | 10        | BEN 15 | 1               | 1.0                | 43                   | still 9-10   |
| 023                |         | REP                   | .12                         | PROCESS               | -                    | -                | 1        | 1.0                        | 75        | BEN 1  | 1               | 1.0                | 75                   | replace tube assy.   |
| 024                |         | REP                   | .03                         | PROCESS               | -                    | -                | 1        | 1.0                        | 50        | BEN 6  | 1               | 1.0                | 50                   | capacitor defective in ~ 20% of all items failing test, (tube assy. must be removed) |
| 025                |         | REP                   | .03                         | PROCESS               | -                    | -                | 1        | 1.0                        | 1.0       | BEN 6  | 1               | 1.0                | 1.0                  | capacitor No. one defective ~ 5% of all failed items                                 |
|                    |         |                       |                             |                       | -                    | -                | 1        | 1.0                        | 2.0       | BEN 6  | 1               | 1.0                | 2.0                  | capacitor assy #2 defective in ~ 5% of all failed items                              |



# OPERATION PROFILE

| NAME <u>Parker</u> ALC <u>OC</u> DATE <u>5/16/89</u> RCC <u>MAT PCA</u> SHEET <u>3</u> OF <u>4</u> |           | WCD <u>CAEA 01</u> WCD DATE <u>86/88</u> |                             |                |                      |          |                |               |                      |
|--|-----------|--|-----------------------------|----------------|----------------------|----------|----------------|---------------|----------------------|
| OPERATION NUMBER   | RCC       | OPERATION DESCRIPTION                    | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS | MANPOWER | EQUIPMENT      | TIME REQUIRED | DATA SOURCE COMMENTS |
|  |           |  |                             |                | %                    | QTY.     | EQUIPMENT CODE | %             |                      |
| 040  | MAT<br>RA | INSPECTION                               | .60                         | TRANSFER       | -                    | 1        | BK10           | 1.0           | see 9-10             |
| 085  |           | TEST                                     | .60                         | SETUP          | -                    | 1        |                | 1.0           | before sea           |
| 360  |           | ASSY                                     | .60                         | PROCESS        | -                    | 1        | 2906           | 1.0           | see 9-10             |
| 405  |           | INSPECTION                               | .60                         | PROCESS        | 1                    | 1        | BK10           | 1.0           | see 9-10             |
| 435  |           | PROC                                     | .60                         | TRANSFER       | -                    | 1        | BK12           | 1.0           | includes             |
|  |           |  |                             | PROCESS        | 1.0                  | 1        | 2958           | 1.0           | including            |



# OPERATION PROFILE

| NAME <u>Parker</u> |     | ALC <u>OC</u>         |                             | DATE <u>5/16/85</u>   |                        | RCC <u>MATRA</u>  |      | SHEET <u>4</u> OF <u>7</u> |                    |                |      |                 |                    |                      |
|--------------------|-----|-----------------------|-----------------------------|-----------------------|------------------------|-------------------|------|----------------------------|--------------------|----------------|------|-----------------|--------------------|----------------------|
| PCN <u>50217A</u>  |     | WCD <u>CAEAO1</u>     |                             | WCD DATE <u>86198</u> |                        |                   |      |                            |                    |                |      |                 |                    |                      |
| OPERATION NUMBER   | RCC | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW HOURS % | SKILL CODE/ LEVEL | QTY. | TIME REQUIRED %            | TIME REQUIRED HRS. | EQUIPMENT CODE | QTY. | TIME REQUIRED % | TIME REQUIRED HRS. | DATA SOURCE COMMENTS |
| 460                | MAT | TEST                  | .60                         | THREAT                | -                      |                   |      |                            |                    |                |      |                 |                    |                      |
|                    | PCA |                       |                             | SETUP                 | -                      |                   | 1    | 1.0                        | .03                |                |      |                 |                    | yard gap machine     |
|                    |     |                       |                             | PROCESS               | -                      | B410              | 1    | 1.0                        | .05                | OC             | 4060 | 1               | 1.0                | .08                  |
| 470                |     | TEST                  | .60                         | THREAT                | -                      |                   |      |                            |                    |                |      |                 |                    | SKILL - 10           |
|                    |     |                       |                             | SETUP                 | -                      |                   | 1    | 1.0                        | .12                |                |      |                 |                    |                      |
|                    |     |                       |                             | PROCESS               | -                      |                   | 1    | 1.0                        | .08                | OC             | 3906 | 1               | 1.0                | .20                  |
| 490                |     | TEST                  | .60                         | THREAT                | -                      |                   |      |                            |                    |                |      |                 |                    | SKILL 9-10           |
|                    |     |                       |                             | SETUP                 | -                      |                   | 1    | 1.0                        | .08                |                |      |                 |                    | second part of test  |
|                    |     |                       |                             | PROCESS               | -                      |                   | 1    | 1.0                        | .03                | OC             | 3906 | 1               | 1.0                | .11                  |
| 499                |     | PAINT                 | 1.0                         | THREAT                | -                      |                   |      |                            |                    |                |      |                 |                    | SKILL 9-10           |
|                    |     |                       |                             | SETUP                 | -                      |                   |      |                            |                    |                |      |                 |                    |                      |
|                    |     |                       |                             | PROCESS               | 1.0                    | B307              | 1    | 1.0                        | .30                |                | W59  | 1               | 1.0                | .30                  |
| 547                |     | PW                    | 1.0                         | THREAT                | -                      |                   |      |                            |                    |                |      |                 |                    | SKILL 9-10           |
|                    |     |                       |                             | SETUP                 | -                      |                   |      |                            |                    |                |      |                 |                    |                      |
|                    |     |                       |                             | PROCESS               | -                      | B410              | 1    | 1.0                        | .11                |                |      |                 |                    |                      |
| 9999               |     | but                   | 1.0                         | Process               | 1.0                    |                   |      |                            |                    |                |      |                 |                    | SKILL 9-10           |



# OPERATION PROFILE

NAME Parker ALC OC DATE 5/19/89 RCC MATPCA SHEET 3 OF 4

WCD CAEM22 WCD DATE 88239

| OPERATION NUMBER | RCC        | OPERATION DESCRIPTION | MAINTENANCE OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |       | SKILL CODE/ LEVEL | MANPOWER |     | EQUIPMENT |                |      | DATA SOURCE COMMENTS |              |   |   |
|------------------|------------|-----------------------|-------------------------------|----------------|----------------------|-------|-------------------|----------|-----|-----------|----------------|------|----------------------|--------------|---|---|
|                  |            |                       |                               |                | %                    | INRS. |                   | QTY.     | %   | INRS.     | EQUIPMENT CODE | QTY. | %                    | INRS.        |   |   |
| 045              | MAT<br>PCA | DIS                   | .05                           | PROCESS        | -                    | -     |                   |          |     |           |                |      |                      | debut, d's.  |   |   |
| 060              |            | TEST                  | .05                           | PROCESS        | -                    | -     | BY 10             | 1        | 1.0 | .58       | BEN 4          | 1    | 1.0                  | .58          | SK 11 5-10  |   |
|                  |            |                       |                               | SETUP          | -                    | -     |                   | -        | -   | -         | -              | -    | -                    | Table tester |   |   |
|                  |            |                       |                               | PROCESS        | -                    | -     |                   | 1        | 1.0 | .03       | -              | -    | -                    | -            | SK 11 5-10  |   |
| 079              |            | TEST                  | .05                           | PROCESS        | -                    | -     |                   | 1        | 1.0 | .03       | BEN 15         | 1    | 1.0                  | .06          | SK 11 5-10  |   |
|                  |            |                       |                               | PROCESS        | -                    | -     |                   | -        | -   | -         | -              | -    | -                    | -            | -   |   |
|                  |            |                       |                               | PROCESS        | -                    | -     |                   | 1        | 1.0 | .17       | BEN 4          | 1    | 1.0                  | .17          | SK 11 5-10<br>change and<br>as necessary.<br>Heavy. ) |   |
| 090              |            | ASSY                  | .05                           | PROCESS        | -                    | -     |                   | 1        | 1.0 | .17       | BEN 4          | 1    | 1.0                  | .17          | SK 11 5-10<br>Identical to<br># 035.                  |   |
|                  |            |                       |                               | PROCESS        | -                    | -     |                   | -        | -   | -         | -              | -    | -                    | -            | -   |   |
|                  |            |                       |                               | PROCESS        | -                    | -     |                   | 1        | 1.0 | .07       | -              | -    | -                    | -            | -   | - |
| 105              |            | TEST                  | .05                           | SETUP          | -                    | -     |                   | 1        | 1.0 | .07       | 3906           | 1    | 1.0                  | .14          | SK 11 5-10  |   |
|                  |            |                       |                               | PROCESS        | -                    | -     |                   | -        | -   | -         | -              | -    | -                    | -            | -   | - |
|                  |            |                       |                               | PROCESS        | -                    | -     |                   | -        | -   | -         | -              | -    | -                    | -            | -   | - |

SK 11 5-10  
Remove and replaced  
as necessary, to  
ensure  
SK 11 5-10  
Identical to  
#035.



# OPERATION PROFILE

NAME Parker ALC OC DATE 5/19/89 RCC MAT PCA SHEET 3 OF 4

WCD CAEM 22 WCD DATE 88239

| OPERATION NUMBER | RCC        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |      | MAINTENANCE |                  | EQUIPMENT |      | TIME REQUIRED |     | DATA SOURCE COMMENTS     |   |
|------------------|------------|-----------------------|-----------------------------|----------------|----------------------|------|-------------|------------------|-----------|------|---------------|-----|--------------------------|---|
|                  |            |                       |                             |                | %                    | HRS. | QTY.        | SKILL CODE/LEVEL | %         | HRS. | QTY.          | %   |                          | HRS.  |
| 110              | MAT<br>PIW | WELD                  | .05                         | PROCESS        | 1.0                  | 24.0 | -           | -                | -         | -    | -             | -   |                          |   |
| 115              | MAT<br>RA  | INSP                  | .05                         | PROCESS        | -                    | -    | 1           | BY10             | 1         | 1.0  | .03           | 1   | 1.0                      | SKILL 5-10<br>Dye in oven,<br>vacuum (dry). |
| 120              |            | PROC                  | .05                         | PROCESS        | 1.0                  | 4.25 | -           | -                | -         | -    | -             | -   | SKILL 5-10<br>water bath |   |
| 121              |            | INSP                  | .05                         | PROCESS        | 1                    | 1.0  | 1           | 1.0              | .05       | 1    | 1.0           | 1   | 1.0                      | SKILL 5-10<br>Same as opn 135               |
| 122              |            | TEST                  | .05                         | SETUP          | -                    | -    | 1           | 1.0              | .07       | -    | -             | -   | -                        |   |
|                  |            | PROCESS               | -                           | PROCESS        | -                    | -    | 1           | 1.0              | .07       | 3906 | 1             | 1.0 | 1.4                      | SKILL 5-10                                  |



# OPERATION PROFILE

NAME Archer ALC OC DATE 5/15/88 RCC MATPCA SHEET 4 OF 4

PCH 50297A WCD CAEM32 WCD DATE 88239

| OPERATION NUMBER | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |      | MANPOWER |                  | EQUIPMENT |                | TIME REQUIRED |      | DATA SOURCE COMMENTS |
|------------------|---------|-----------------------|-----------------------------|----------------|----------------------|------|----------|------------------|-----------|----------------|---------------|------|----------------------|
|                  |         |                       |                             |                | %                    | HRS. | QTY.     | SKILL CODE/LEVEL | QTY.      | EQUIPMENT CODE | %             | HRS. |                      |
| 123              | MAT PCA | PROC                  | .05                         | PROCESS        | -                    | -    | 1        | BY 07            | 1         | BEN 41         | 1.0           | .25  | Send 64st            |
| 125              |         | PAINT                 | 1.0                         | PROCESS        | 1.0                  | 2.0  | 1        | B307             | 1         | W59            | 1.0           | .30  | SK 11 WG-07          |
| 147              |         | pw                    | 1.0                         | PROCESS        | -                    | -    | 1        | BY 10            | 1         | -              | -             | -    | SK 11 9-10           |
| 9999             |         | Out                   | 1.0                         | PROCESS        | 1.0                  | 9.6  |          |                  |           |                |               |      |                      |
|                  |         |                       |                             | TRANSIT        |                      |      |          |                  |           |                |               |      |                      |
|                  |         |                       |                             | SETUP          |                      |      |          |                  |           |                |               |      |                      |
|                  |         |                       |                             | PROCESS        |                      |      |          |                  |           |                |               |      |                      |
|                  |         |                       |                             | TRANSIT        |                      |      |          |                  |           |                |               |      |                      |
|                  |         |                       |                             | SETUP          |                      |      |          |                  |           |                |               |      |                      |
|                  |         |                       |                             | PROCESS        |                      |      |          |                  |           |                |               |      |                      |



**SUBJECT**

DATE 5/19/89

ITEM CODE  
PCN  
NBN  
P/M

WCD CAEM 22

WCD DATE 88239

50297A

CHART BEGINS 010

CHART ENDS 147

**PREPARED BY**

[illegible]

## OPERATION

## TRANSPORTATION

**▽ STORAGE**

**D DELAY**

☐ **INSPECTION**

**LSC-20147**



# OPERATION PROFILE

NAME Parker ALC OC DATE 5/16/89 RCC MATPCA SHEET 1 OF 1

PCN 61234A WCD CAECOS WCD DATE 890415

| OPERATION NUMBER | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |      | SKILL CODE/LEVEL | MANPOWER |   | EQUIPMENT |      | DATA SOURCE COMMENTS |
|------------------|---------|-----------------------|-----------------------------|----------------|----------------------|------|------------------|----------|---|-----------|------|----------------------|
|                  |         |                       |                             |                | %                    | HRS. |                  | QTY.     | % | HRS.      | QTY. |                      |
| DO               | MAT PCA | IN                    | 1.0                         | TRANSIT        |                      |      |                  |          |   |           |      |                      |
|                  |         |                       |                             | SETUP          |                      |      |                  |          |   |           |      |                      |
|                  |         |                       |                             | PROCESS        | 1.0                  | 206  |                  |          |   |           |      |                      |
|                  |         |                       |                             | TRANSIT        |                      |      |                  |          |   |           |      |                      |
|                  |         |                       |                             | SETUP          |                      |      |                  |          |   |           |      |                      |
|                  |         |                       |                             | PROCESS        |                      |      |                  |          |   |           |      |                      |
|                  |         |                       |                             | TRANSIT        |                      |      |                  |          |   |           |      |                      |
|                  |         |                       |                             | SETUP          |                      |      |                  |          |   |           |      |                      |
|                  |         |                       |                             | PROCESS        |                      |      |                  |          |   |           |      |                      |
|                  |         |                       |                             | TRANSIT        |                      |      |                  |          |   |           |      |                      |
|                  |         |                       |                             | SETUP          |                      |      |                  |          |   |           |      |                      |
|                  |         |                       |                             | PROCESS        |                      |      |                  |          |   |           |      |                      |
|                  |         |                       |                             | TRANSIT        |                      |      |                  |          |   |           |      |                      |
|                  |         |                       |                             | SETUP          |                      |      |                  |          |   |           |      |                      |
|                  |         |                       |                             | PROCESS        |                      |      |                  |          |   |           |      |                      |

NOTE: This sheet for IN-OUT DATES



# OPERATION PROFILE

| NAME <u>Parker</u> |        | ALC <u>OC</u>         |                             | DATE <u>5/11/89</u> |                      | RCC <u>MATPCA</u>     |      | SHEET <u>1</u> OF <u>4</u> |                    |                |      |                 |                    |                      |
|--------------------|--------|-----------------------|-----------------------------|---------------------|----------------------|-----------------------|------|----------------------------|--------------------|----------------|------|-----------------|--------------------|----------------------|
| PCH                |        | 61234A                |                             | WCD <u>CAECOS</u>   |                      | WCD DATE <u>89085</u> |      |                            |                    |                |      |                 |                    |                      |
| OPERATION NUMBER   | RCC    | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE      | MANDATORY FLOW HOURS | SKILL CODE/LEVEL      | QTY. | TIME REQUIRED %            | TIME REQUIRED HRS. | EQUIPMENT CODE | QTY. | TIME REQUIRED % | TIME REQUIRED HRS. | DATA SOURCE COMMENTS |
| 010                | MATPCA | REC                   | 1.0                         | TRAINING            | -                    |                       |      |                            |                    |                |      |                 |                    |                      |
| 015                |        | INFO                  | 1.0                         | SETUP               | -                    |                       |      |                            |                    |                |      |                 |                    |                      |
| 017                |        | PROC                  | 1.0                         | PROCESS             | -                    |                       |      |                            |                    |                |      |                 |                    |                      |
| 018                |        | TEST                  | 1.0                         | SETUP               | -                    |                       |      |                            |                    |                |      |                 |                    |                      |
| 020                |        | REP                   | 1.0                         | PROCESS             | -                    |                       |      |                            |                    |                |      |                 |                    |                      |



# OPERATION PROFILE

| NAME <u>Perker</u> |            | ALC <u>DC</u>         |                             | DATE <u>5/16/89</u>     |                      | RCC <u>MATRA</u> |            | SHEET <u>3</u> OF <u>4</u> |                    |                |                 |                    |   |
|--------------------|------------|-----------------------|-----------------------------|-------------------------|----------------------|------------------|------------|----------------------------|--------------------|----------------|-----------------|--------------------|---|
| PCN <u>61234A</u>  |            | WCD <u>CAECOS</u>     |                             | WCD DATE <u>8/14/89</u> |                      |                  |            |                            |                    |                |                 |                    |   |
| OPERATION NUMBER   | RCC        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE          | MANDATORY FLOW HOURS |                  | MAIN POWER |                            | EQUIPMENT          |                | TIME REQUIRED % | TIME REQUIRED HRS. | DATA SOURCE COMMENTS  |
|                    |            |                       |                             |                         | %                    | HRS.             | QTY.       | TIME REQUIRED %            | TIME REQUIRED HRS. | EQUIPMENT CODE |                 |                    |   |
| 021                | MAT<br>PCA | TEST                  | .30                         | TEST                    | -                    | -                | -          | -                          | -                  | -              | -               | -                  | Tube assy. are defective in approx. 50% of all items fail. 1st.                   |
| 022                |            | REP                   | .30                         | REPAIR                  | -                    | -                | 1          | 1.0                        | 1.0                | 1.0            | 1.0             | 1.43               | Still 9-10  |
| 023                |            | REP                   | .12                         | REPAIR                  | -                    | -                | 1          | 1.0                        | 1.0                | 1.0            | 1.0             | 1.75               | Recifier defective in ~20% of all items failing test, Tube assy. must be replaced |
| 024                |            | REP                   | .03                         | REPAIR                  | -                    | -                | 1          | 1.0                        | 1.0                | 1.0            | 1.0             | 1.50               | Capacitor No. one defective ~3% of all failed items                               |
| 025                |            | REP                   | .03                         | REPAIR                  | -                    | -                | 1          | 1.0                        | 1.0                | 1.0            | 1.0             | 1.0                | Capacitor assy #2 defective in ~5% of all failed items                            |



# OPERATION PROFILE

NAME Parker ALC OC DATE 5/16/89 RCC MAT PCA SHEET 3 OF 4

WCD CAECOS WCD DATE 8/9/85

| OPERATION NUMBER | RCC    | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |      | MANPOWER |                   | EQUIPMENT      |      | TIME REQUIRED |      | DATA SOURCE COMMENTS          |
|------------------|--------|-----------------------|-----------------------------|----------------|----------------------|------|----------|-------------------|----------------|------|---------------|------|-------------------------------|
|                  |        |                       |                             |                | %                    | INRS | QTY.     | SKILL CODE/ LEVEL | EQUIPMENT CODE | QTY. | %             | INRS |                               |
| 040              | MAT RA | INSPI                 | .60                         | TRANSIT        | -                    | -    | 1        | 0410              |                |      | 1.0           | .08  | SKILL 5-10                    |
|                  |        |                       |                             | SETUP          | -                    | -    |          |                   |                |      |               |      |                               |
|                  |        |                       |                             | PROCESS        | -                    | -    |          |                   |                |      |               |      | before setting                |
| 085              |        | TEST                  | .60                         | TRANSIT        | -                    | -    |          |                   |                |      |               |      | see 0/8                       |
|                  |        |                       |                             | SETUP          | -                    | -    | 1        |                   |                |      |               |      |                               |
|                  |        |                       |                             | PROCESS        | -                    | -    | 1        |                   | 3206           | 1    | 1.0           | .20  |                               |
| 360              |        | ASSY                  | .60                         | TRANSIT        | -                    | -    |          |                   |                |      |               |      | case messy and cleaned solder |
|                  |        |                       |                             | SETUP          | -                    | -    |          |                   |                |      |               |      |                               |
|                  |        |                       |                             | PROCESS        | 1                    | 1.0  | 1        |                   | PEN4           | 1    | 1.0           | 1.0  | SKILL 5-10                    |
| 405              |        | INSPI                 | .60                         | TRANSIT        | -                    | -    |          |                   |                |      |               |      | Leak at water                 |
|                  |        |                       |                             | SETUP          | -                    | -    |          |                   |                |      |               |      |                               |
|                  |        |                       |                             | PROCESS        | -                    | -    | 1        |                   | BEN 17         | 1    | 1.0           | .03  | SKILL 5-10                    |
| 435              |        | PROC                  | .60                         | TRANSIT        | -                    | -    |          |                   |                |      |               |      | includes including            |
|                  |        |                       |                             | SETUP          | -                    | -    |          |                   |                |      |               |      |                               |
|                  |        |                       |                             | PROCESS        | 1.0                  | 2.5  | 1        |                   | OC 2758        | 1    | 1.0           | .02  | SKILL 5-10                    |



# OPERATION PROFILE

| NAME <u>Perker</u> |     | ALC <u>OC</u>         |                             | DATE <u>5/16/89</u>   |                  | RCC <u>MATRA</u>      |                  | SHEET <u>4</u> OF <u>4</u> |                 |                    |                |      |                 |                    |                      |
|--------------------|-----|-----------------------|-----------------------------|-----------------------|------------------|-----------------------|------------------|----------------------------|-----------------|--------------------|----------------|------|-----------------|--------------------|----------------------|
| WCD <u>CAECOS</u>  |     | WCD DATE <u>89045</u> |                             | WCD DATE <u>89045</u> |                  | WCD DATE <u>89045</u> |                  | WCD DATE <u>89045</u>      |                 |                    |                |      |                 |                    |                      |
| OPERATION NUMBER   | RCC | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW % | MANDATORY FLOW HRS.   | SKILL CODE/LEVEL | QTY.                       | TIME REQUIRED % | TIME REQUIRED HRS. | EQUIPMENT CODE | QTY. | TIME REQUIRED % | TIME REQUIRED HRS. | DATA SOURCE COMMENTS |
| 460                | MAT | TEST                  | .60                         | TEST                  | -                | -                     |                  |                            |                 |                    |                |      |                 |                    | SPARA 300 machine    |
| 470                | PCA | TEST                  | .60                         | TEST                  | -                | -                     |                  |                            |                 |                    |                |      |                 |                    | SPARA 300 machine    |
| 490                |     | TEST                  | .60                         | TEST                  | -                | -                     |                  |                            |                 |                    |                |      |                 |                    | SPARA 300 machine    |
| 499                |     | PAINT                 | 1.0                         | PAINT                 | -                | -                     |                  |                            |                 |                    |                |      |                 |                    | SPARA 300 machine    |
| 547                |     | PW                    | 1.0                         | PW                    | -                | -                     |                  |                            |                 |                    |                |      |                 |                    | SPARA 300 machine    |
| 9999               |     | OUT                   | 1.0                         | OUT                   | -                | -                     |                  |                            |                 |                    |                |      |                 |                    | SPARA 300 machine    |



747

**SUBJECT**

DATE 5/16/89

ITEM CODE  
PCN  
NUN.  
P/M

WCD CAECOS WCD DATE 89085

CHART BEGINS 010

**CHART ENDS:**

**PREPARED BY**

[illegible]

## OPERATION

**▷ TRANSPORTATION**

**▽ STORAGE**

**D DELAY**

## INSPECTION

**LSC-20147**



# OPERATION PROFILE

| NAME <u>Parker</u> |           | ALC <u>OC</u>         |                             | DATE <u>5/19/89</u>   |                        | RCC <u>MAT PCN</u> |      | SHEET <u>1</u> OF <u>1</u> |                 |                |      |                      |                 |
|--------------------|-----------|-----------------------|-----------------------------|-----------------------|------------------------|--------------------|------|----------------------------|-----------------|----------------|------|----------------------|-----------------|
| PCN <u>97133A</u>  |           | WCD <u>CAEB08</u>     |                             | WCD DATE <u>89033</u> |                        |                    |      |                            |                 |                |      |                      |                 |
| OPERATION NUMBER   | RCC       | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW (HOURS) | MANPOWER           |      |                            | EQUIPMENT       |                |      | DATA SOURCE COMMENTS |                 |
|                    |           |                       |                             |                       |                        | SKILL CODE/LEVEL   | QTY. | TIME REQUIRED %            | TIME REQUIRED % | EQUIPMENT CODE | QTY. |                      | TIME REQUIRED % |
| 00                 | MAT<br>RA | IN                    | 1.0                         | TRANSIT               | 10480                  |                    |      |                            |                 |                |      |                      |                 |
|                    |           |                       |                             | SETUP                 |                        |                    |      |                            |                 |                |      |                      |                 |
|                    |           |                       |                             | PROCESS               |                        |                    |      |                            |                 |                |      |                      |                 |
|                    |           |                       |                             | TRANSIT               |                        |                    |      |                            |                 |                |      |                      |                 |
|                    |           |                       |                             | SETUP                 |                        |                    |      |                            |                 |                |      |                      |                 |
|                    |           |                       |                             | PROCESS               |                        |                    |      |                            |                 |                |      |                      |                 |
|                    |           |                       |                             | TRANSIT               |                        |                    |      |                            |                 |                |      |                      |                 |
|                    |           |                       |                             | SETUP                 |                        |                    |      |                            |                 |                |      |                      |                 |
|                    |           |                       |                             | PROCESS               |                        |                    |      |                            |                 |                |      |                      |                 |
|                    |           |                       |                             | TRANSIT               |                        |                    |      |                            |                 |                |      |                      |                 |
|                    |           |                       |                             | SETUP                 |                        |                    |      |                            |                 |                |      |                      |                 |
|                    |           |                       |                             | PROCESS               |                        |                    |      |                            |                 |                |      |                      |                 |
|                    |           |                       |                             | TRANSIT               |                        |                    |      |                            |                 |                |      |                      |                 |
|                    |           |                       |                             | SETUP                 |                        |                    |      |                            |                 |                |      |                      |                 |
|                    |           |                       |                             | PROCESS               |                        |                    |      |                            |                 |                |      |                      |                 |

Note: This sheet for in-out dates.



# OPERATION PROFILE

wendel  
Hawkins

| NAME <u>Barker</u> |     | ALC <u>OC</u>         |                             | DATE <u>5/19/89</u>   |                      | RCC <u>MATPCA</u>     |          | SHEET <u>1</u> OF <u>3</u> |           |      |                      |     |            |
|--------------------|-----|-----------------------|-----------------------------|-----------------------|----------------------|-----------------------|----------|----------------------------|-----------|------|----------------------|-----|------------|
| WCD <u>CAEBQ8</u>  |     | WCD DATE <u>89038</u> |                             | WCD DATE <u>89038</u> |                      | WCD DATE <u>89038</u> |          | WCD DATE <u>89038</u>      |           |      |                      |     |            |
| OPERATION NUMBER   | RCC | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW HOURS |                       | MANPOWER |                            | EQUIPMENT |      | DATA SOURCE COMMENTS |     |            |
|                    |     |                       |                             |                       | %                    | HRS.                  | QTY.     | %                          | HRS.      | QTY. |                      | %   | HRS.       |
| 010                | MAT | REC                   | 1.0                         | PROCESS               | -                    | -                     | 1        | 1.0                        | 1         | 1.0  | 1                    | 1.0 | SR 11 S-12 |
| 015                | RA  | INFO                  | 1.0                         | PROCESS               | -                    | -                     | 1        | 1.0                        | 1         | 1.0  | 1                    | 1.0 | SR 11 S-12 |
| 020                |     | DIS                   | 1.0                         | PROCESS               | -                    | -                     | 1        | 1.0                        | 1         | 1.0  | 1                    | 1.0 | SR 11 S-12 |
| 030                |     | CLN                   | 1.0                         | PROCESS               | -                    | -                     | 1        | 1.0                        | 1         | 1.0  | 1                    | 1.0 | SR 11 S-12 |
| 040                |     | INSP                  | 1.0                         | PROCESS               | -                    | -                     | 1        | 1.0                        | 1         | 1.0  | 1                    | 1.0 | SR 11 S-12 |



# OPERATION PROFILE

NAME Per Ker ALC OC DATE 05/19/88 RCC MAT PCA SHEET 2 OF 3

| WCD              |            | CAEBOF                |                             | WCD DATE       |                      | 89033 |           |                  |           |     |      |                |                      |      |      |  |
|------------------|------------|-----------------------|-----------------------------|----------------|----------------------|-------|-----------|------------------|-----------|-----|------|----------------|----------------------|------|------|--|
| OPERATION NUMBER | RCC        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |       | MAINPOWER |                  | EQUIPMENT |     |      |                | DATA SOURCE COMMENTS |      |      |  |
|                  |            |                       |                             |                | %                    | HRS.  | QTY.      | SKILL CODE/LEVEL | QTY.      | %   | HRS. | EQUIPMENT CODE |                      | QTY. | %    | HRS.   |
| 070              | MAT<br>PCA | TEST                  | 1.0                         | PROCESS        | -                    | -     | 1         | BY 10            | 1         | 1.0 | 1.17 | BEN 4          | 1                    | 1.0  | 1.17 | Coil tested<br>D: electric test  |
|                  |            |                       |                             |                |                      |       |           |                  |           |     |      |                |                      |      |      |  |
| 090              | MAT<br>PCA | MACH                  | 1.5                         | PROCESS        | 1.0                  | 240   | -         | -                | -         | -   | -    | -              | -                    | -    | -    | still 8-10<br>housing crack<br>(15-8 accuracy)                                 |
|                  |            |                       |                             |                |                      |       |           |                  |           |     |      |                |                      |      |      |  |
| 155              | MAT<br>PCA | ASSY                  | 1.0                         | PROCESS        | -                    | -     | 1         | BY 10            | 1         | 1.0 | 1.0  | BEN 4          | 1                    | 1.0  | 1.0  | This delayed<br>about 1.5<br>occurs, other<br>100%<br>said 1.0-1.5             |
|                  |            |                       |                             |                |                      |       |           |                  |           |     |      |                |                      |      |      |  |
| 205              | MAT<br>PCA | TEST                  | 1.0                         | PROCESS        | -                    | -     | 1         | (                | -         | -   | -    | -              | -                    | -    | -    | Added Test<br>Apply air<br>check for<br>Important pro<br>Needles to<br>delays. |
|                  |            |                       |                             |                |                      |       |           |                  |           |     |      |                |                      |      |      |  |
| 255              | MAT<br>PCA | TEST                  | 1.0                         | SETUP          | -                    | -     | 1         | -                | 1         | 1.0 | 1.08 | BEN 4          | 1                    | 1.0  | 1.08 | Tested in<br>Bldg. 3108.<br>by technician<br>doing overhaul                    |
|                  |            |                       |                             |                |                      |       |           |                  |           |     |      |                |                      |      |      |  |
|                  |            |                       |                             | PROCESS        | -                    | -     | 1         |                  |           | 1.0 | 1.50 |                |                      |      |      | still 8-10   |



# OPERATION PROFILE

| NAME <u>Parker</u> |           | ALC <u>OC</u>         |                             | DATE <u>5/19/89</u>     |                      | RCC <u>MATPCA</u> |           | SHEET <u>3</u> OF <u>3</u> |           |                |                 |                    |                        |
|--------------------|-----------|-----------------------|-----------------------------|-------------------------|----------------------|-------------------|-----------|----------------------------|-----------|----------------|-----------------|--------------------|------------------------|
| PCN <u>97133A</u>  |           | WCD <u>CAE008</u>     |                             | WCD DATE <u>8/03/89</u> |                      |                   |           |                            |           |                |                 |                    |                        |
| OPERATION NUMBER   | RCC       | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE          | MANDATORY FLOW HOURS |                   | MAINPOWER |                            | EQUIPMENT |                | TIME REQUIRED % | TIME REQUIRED HRS. | DATA SOURCE COMMENTS   |
|                    |           |                       |                             |                         | %                    | HRS.              | QTY.      | SKILL CODE/LEVEL           | QTY.      | EQUIPMENT CODE |                 |                    |                        |
| 285                | MAT<br>RA | ASSY                  | 1.0                         | PROCESS                 | -                    | -                 | 1         | BY10                       | 1         | BEN4           | 1.0             | 1.7                | includes safety wiring |
| 305                |           | PW                    | 1.0                         | TRANSIT                 |                      |                   |           |                            |           |                |                 |                    |                        |
| 305                |           |                       |                             | SETUP                   |                      |                   |           |                            |           |                |                 |                    |                        |
| 9999               |           | OUT                   | 1.0                         | PROCESS                 |                      |                   | 1         |                            |           |                |                 |                    | SK-4 S-10              |
| 9999               |           |                       |                             | TRANSIT                 |                      |                   |           |                            |           |                |                 |                    |                        |
| 9999               |           |                       |                             | SETUP                   |                      |                   |           |                            |           |                |                 |                    |                        |
| 9999               |           |                       |                             | PROCESS                 | 109.6                |                   |           |                            |           |                |                 |                    |                        |
|                    |           |                       |                             | TRANSIT                 |                      |                   |           |                            |           |                |                 |                    |                        |
|                    |           |                       |                             | SETUP                   |                      |                   |           |                            |           |                |                 |                    |                        |
|                    |           |                       |                             | PROCESS                 |                      |                   |           |                            |           |                |                 |                    |                        |
|                    |           |                       |                             | TRANSIT                 |                      |                   |           |                            |           |                |                 |                    |                        |
|                    |           |                       |                             | SETUP                   |                      |                   |           |                            |           |                |                 |                    |                        |
|                    |           |                       |                             | PROCESS                 |                      |                   |           |                            |           |                |                 |                    |                        |



### FLOW PROCESS CHART

**SUBJECT**

DATE 5/15/88

**ITEM CODE**

**PCN**

## HOW

**P/M**

~~AK~~ 92133A

WCD CAEB08

WCD DATE 89033

## CHART BEGINS

010

**CHART ENDS**

**PREPARED BY**

72

[illegible]

## OPERATION

## TRANSPORTATION

**▽ STORAGE**

**D DELAY**

☐ INSPECTION



# OPERATION PROFILE

| NAME <u>Pecker</u> |           | ALC <u>OC</u>         |                             | DATE <u>5/8/89</u>    |                                | RCC <u>MAT RA</u> |      | SHEET <u>1</u> OF <u>1</u> |      |                      |                         |
|--------------------|-----------|-----------------------|-----------------------------|-----------------------|--------------------------------|-------------------|------|----------------------------|------|----------------------|-------------------------|
| FCH<br>NSW<br>PRI  |           | WCD <u>SAEG07A</u>    |                             | WCD DATE <u>85045</u> |                                |                   |      |                            |      |                      |                         |
| OPERATION NUMBER   | RCC       | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW HOURS<br>% HRS. | MANPOWER          |      | EQUIPMENT                  |      | DATA SOURCE COMMENTS |                         |
|                    |           |                       |                             |                       |                                | SKILL CODE/LEVEL  | QTY. | TIME REQUIRED<br>% HRS.    | QTY. |                      | TIME REQUIRED<br>% HRS. |
| 00                 | MAT RA IN | IN                    | 1.0                         | TRANSIT               | 1.0 25.0                       |                   |      |                            |      |                      |                         |
|                    |           |                       |                             | SETUP                 |                                |                   |      |                            |      |                      |                         |
|                    |           |                       |                             | PROCESS               |                                |                   |      |                            |      |                      |                         |
|                    |           |                       |                             | TRANSIT               |                                |                   |      |                            |      |                      |                         |
|                    |           |                       |                             | SETUP                 |                                |                   |      |                            |      |                      |                         |
|                    |           |                       |                             | PROCESS               |                                |                   |      |                            |      |                      |                         |
|                    |           |                       |                             | TRANSIT               |                                |                   |      |                            |      |                      |                         |
|                    |           |                       |                             | SETUP                 |                                |                   |      |                            |      |                      |                         |
|                    |           |                       |                             | PROCESS               |                                |                   |      |                            |      |                      |                         |
|                    |           |                       |                             | TRANSIT               |                                |                   |      |                            |      |                      |                         |
|                    |           |                       |                             | SETUP                 |                                |                   |      |                            |      |                      |                         |
|                    |           |                       |                             | PROCESS               |                                |                   |      |                            |      |                      |                         |
|                    |           |                       |                             | TRANSIT               |                                |                   |      |                            |      |                      |                         |
|                    |           |                       |                             | SETUP                 |                                |                   |      |                            |      |                      |                         |
|                    |           |                       |                             | PROCESS               |                                |                   |      |                            |      |                      |                         |
|                    |           |                       |                             | TRANSIT               |                                |                   |      |                            |      |                      |                         |
|                    |           |                       |                             | SETUP                 |                                |                   |      |                            |      |                      |                         |
|                    |           |                       |                             | PROCESS               |                                |                   |      |                            |      |                      |                         |

NOTE: This sheet FOR IN-DUT DATES



# OPERATION PROFILE

| NAME <u>Becker</u> ALC <u>OC</u> DATE <u>5/8/87</u> RCC <u>PA7 PCA</u> SHEET <u>1</u> OF <u>10</u> |         |                       |                             |                |                      |      |          |   |           |      |                    |                      |  |
|--|---------|-----------------------|-----------------------------|----------------|----------------------|------|----------|---|-----------|------|--------------------|----------------------|--|
| PCN <u>98001A</u> WCD <u>CAEC07A</u> WCD DATE <u>89082</u>   |         |                       |                             |                |                      |      |          |   |           |      |                    |                      |  |
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |      | MANPOWER |   | EQUIPMENT |      | TIME REQUIRED HRS. | DATA SOURCE COMMENTS |  |
|  |         |                       |                             |                | %                    | HRS. | QTY.     | % | HRS.      | QTY. |                    |                      | %  |
| 010  | MAT PCA | REC                   | 1.0                         | PROCESS        | -                    | -    | BY 10    | 1 | 1.0       | 0.03 | 1                  | 1.0                  | 9-10                                     |
| 018  | MAT PCA | TEST                  | 1.0                         | SETUP          | -                    | -    | -        | 1 | 1.0       | 0.03 | -                  | -                    | no mat-rem news for this opns (see 9-10) |
| 010  | MAT PCA | MACT                  | .50                         | PROCESS        | -                    | -    | -        | 1 | 1.0       | 0.03 | 1                  | 1.0                  | 5-10                                     |
| 020  | MAT PCA | U12                   | .50                         | PROCESS        | -                    | -    | -        | - | -         | -    | -                  | -                    | 5-10                                     |
| 020  | MAT PCA | U12                   | .50                         | PROCESS        | -                    | -    | -        | - | -         | -    | -                  | -                    | 5-10                                     |



# OPERATION IOFILE

NAME Parker ALC QC DATE 5/8/89 RCC MAT PCA SHEET 1 OF 10

WCD CAEC07A WCD DATE 8/08/88

| OPERATION NUMBER | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |      | SKILL CODE/LEVEL | TIME REQUIRED |      | EQUIPMENT CODE | QTY. | TIME REQUIRED |      | DATA SOURCE COMMENTS |
|------------------|---------|-----------------------|-----------------------------|----------------|----------------------|------|------------------|---------------|------|----------------|------|---------------|------|----------------------|
|                  |         |                       |                             |                | %                    | HRS. |                  | %             | HRS. |                |      | %             | HRS. |                      |
| 040              | MAT PCA | CLN                   | .50                         | PROCESS        | -                    | -    | BY10             | 1.0           | .08  | BENZ           | 1    | 1.0           | .08  | SK.11 9-10           |
| 050              |         | INSP                  | .50                         | PROCESS        | -                    | -    |                  | 1.0           | .03  | BENZ           | 1    | 1.0           | .03  | SK.11 9-10           |
| 051              |         | INSP                  | .50                         | PROCESS        | -                    | -    |                  | 1.0           | .03  | BENZ           | 1    | 1.0           | .03  | SK.11 9-10           |
| 053              |         | ASSY                  | .50                         | PROCESS        | -                    | -    |                  | 1.0           | .07  | BENZ           | 1    | 1.0           | .07  | SK.11 9-10           |
| 055              | MAT PTW | WELD                  | .50                         | PROCESS        | -                    | -    |                  | 1.0           | .07  | BENZ           | 1    | 1.0           | .07  | SK.11 9-10           |

Welding  
for add. of extension  
studs. Note IF  
welding must be extended  
must remove approx. 1/2"  
(between stud bases).



# OPERATION IOFILE

NAME Parker ALC OC DATE 5/8/89 RCC MATPCA SHEET 5 OF 10

| OPERATION<br>NUMBER | RCC        | OPERATION<br>DESCRIPTION | MANDATORY<br>OCCURRENCE<br>FACTOR | OPERATION<br>TYPE | MANDATORY<br>FLOW HOURS |      | MANPOWER |                         | EQUIPMENT |                   | TIME REQUIRED |      | DATA SOURCE<br>COMMENTS  |
|---------------------|------------|--------------------------|-----------------------------------|-------------------|-------------------------|------|----------|-------------------------|-----------|-------------------|---------------|------|--|
|                     |            |                          |                                   |                   | %                       | HRS. | QTY.     | SKILL<br>CODE/<br>LEVEL | QTY.      | EQUIPMENT<br>CODE | %             | HRS. |  |
| 060                 | MAT<br>PCA | TEST                     | .50                               | PROCESS           | -                       | -    | 1        | BY10                    | 1         | 0EN2              | 1.0           | 1.0  | SK 11 5-10<br>this opn required<br>only 5% of the time.<br>dependent on results of<br>opns 80 & 90 |
| 065                 | MAT<br>PCA | MACH                     | .50                               | PROCESS           | 1.0                     | 24.0 | -        | -                       | -         | -                 | -             | -    | this opn required<br>only 5% of the time.<br>dependent on results of<br>opns 80 & 90               |
| 070                 | MAT<br>PCA | WELD                     | .03                               | PROCESS           | 1.0                     | 24.0 | -        | -                       | -         | -                 | -             | -    | this opn required<br>only 5% of the time.<br>dependent on results of<br>opns 80 & 90               |
| 080                 | MAT<br>PCA | TEST                     | .50                               | PROCESS           | -                       | -    | 1        | BY10                    | 1         | 4060              | 1.0           | 1.0  | capacitor analyzer<br>OC # 4060<br>SK 11 4-10  |
| 090                 | MAT<br>PCA | TEST                     | .50                               | SETUP             | -                       | -    | 1        | -                       | -         | -                 | -             | -    | REQ 4000<br>piezoelect. not available.<br>Matsy use test stand.<br>SK 11 9-10                      |



# OPERATION IOFILE

| NAME <u>Parker</u> |         | ALC <u>OC</u>           |                             | DATE <u>5/18/89</u>     |                      | RCC <u>MAT PCA</u>      |                  | SHEET <u>4</u> OF <u>10</u> |     |           |      |                 |                    |                      |
|--------------------|---------|-------------------------|-----------------------------|-------------------------|----------------------|-------------------------|------------------|-----------------------------|-----|-----------|------|-----------------|--------------------|----------------------|
| WCD <u>CAEC07A</u> |         | WCD DATE <u>8/01/85</u> |                             | WCD DATE <u>8/01/85</u> |                      | WCD DATE <u>8/01/85</u> |                  | WCD DATE <u>8/01/85</u>     |     |           |      |                 |                    |                      |
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION   | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE          | MANDATORY FLOW HOURS |                         | SKILL CODE/LEVEL | MAINPOWER                   |     | EQUIPMENT |      | TIME REQUIRED % | TIME REQUIRED HRS. | DATA SOURCE COMMENTS |
|                    |         |                         |                             |                         | %                    | HRS.                    |                  | QTY.                        | %   | HRS.      | QTY. |                 |                    |                      |
| 100                | MAT PCA | TEST                    | .50                         | TEST                    | -                    | -                       | BY10             | 1                           | 1.0 | .02       | 1    | 1.0             | .02                | use data meter       |
| 110                |         | TEST                    | .50                         | TEST                    | -                    | -                       |                  |                             |     |           |      |                 |                    |                      |
| 120                |         | TEST                    | .50                         | TEST                    | -                    | -                       |                  | 1                           | 1.0 | .02       | 1    | 1.0             | .02                | 5/10/11 9-10         |
| 130                |         | TEST                    | .15                         | TEST                    | -                    | -                       |                  | 1                           | 1.0 | .08       | 1    | 1.0             | .16                | 5/10/11 5-10         |
| 140                |         | TEST                    | .50                         | TEST                    | -                    | -                       |                  | 1                           | 1.0 | .08       | 1    | 1.0             | .08                | 5/10/11 5-10         |



# OPERATION IOFILE

| NAME <u>Parker</u> ALC <u>OC</u> DATE <u>5/8/89</u> RCC <u>MAT PCA</u> SHEET <u>5</u> OF <u>10</u> |     |                       |                             |                |                      |      |                  |          |     |           |      |               |      |                      |
|--|-----|-----------------------|-----------------------------|----------------|----------------------|------|------------------|----------|-----|-----------|------|---------------|------|----------------------|
| WCD <u>CAESOTA</u> WCD DATE <u>8/8/88</u>  |     |                       |                             |                |                      |      |                  |          |     |           |      |               |      |                      |
| OPERATION NUMBER   | RCC | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS |      | SKILL CODE/LEVEL | MANPOWER |     | EQUIPMENT |      | TIME REQUIRED |      | DATA SOURCE COMMENTS |
|  |     |                       |                             |                | %                    | HRS. |                  | QTY.     | %   | HRS.      | QTY. | %             | HRS. |                      |
| 150  | MAT | TEST                  | .50                         | PROCESS        | -                    | -    | BV10             | 1        | 1.0 | .08       | 1    | 1.0           | .08  | SK 11 1-10           |
| 160  | PCA | TEST                  | .50                         | PROCESS        | -                    | -    |                  | 1        | 1.0 | .08       | 1    | 1.0           | .08  | SK 11 1-10           |
| 170  |     | DIS                   | .50                         | PROCESS        | -                    | -    |                  | 1        | 1.0 | .80       | 1    | 1.0           | 11.5 | SK 11 1-10           |
| 175  |     | TEST                  | .50                         | SETUP          | -                    | -    |                  | 1        | 1.0 | .08       | 1    | 1.0           | .08  | SK 11 1-10           |
| 180  |     | TEST                  | .50                         | PROCESS        | -                    | -    |                  | 1        | 1.0 | .08       | 1    | 1.0           | .16  | SK 11 1-10           |
|  |     |                       |                             | SETUP          | -                    | -    |                  | 1        | 1.0 | .08       | 1    | 1.0           | .16  | SK 11 1-10           |
|  |     |                       |                             | PROCESS        | -                    | -    |                  | 1        | 1.0 | .12       | 1    | 1.0           | .20  | SK 11 1-10           |



# OPERATION PROFILE

NAME Parker ALC OC DATE 5/8/89 RCC NAT PCA SHEET 6 OF 10

| WCD CAEC07A      |            |                       |                             |                    |                      |      |           |      |                  |               |      |                |      |               | WCD DATE 89083 |                                    |  |  |  |  |  |  |  |  |
|------------------|------------|-----------------------|-----------------------------|--------------------|----------------------|------|-----------|------|------------------|---------------|------|----------------|------|---------------|----------------|------------------------------------|--|--|--|--|--|--|--|--|
| OPERATION NUMBER | RCC        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE     | MANDATORY FLOW HOURS |      | MAINPOWER |      | SKILL CODE/LEVEL | TIME REQUIRED |      | EQUIPMENT CODE | QTY. | TIME REQUIRED |                | DATA SOURCE COMMENTS               |  |  |  |  |  |  |  |  |
|                  |            |                       |                             |                    | %                    | HRS. | %         | HRS. |                  | %             | HRS. |                |      | %             | HRS.           |                                    |  |  |  |  |  |  |  |  |
| 197              | MAT<br>PCA | 11ST                  | .50                         | <del>TRANSIT</del> |                      |      |           |      |                  |               |      |                |      |               |                | SKILL 9-10<br>3906                 |  |  |  |  |  |  |  |  |
|                  |            |                       |                             | SETUP              |                      |      |           | 8410 | 1                | 1.0           | .03  |                |      |               |                |                                    |  |  |  |  |  |  |  |  |
|                  |            |                       |                             | PROCESS            |                      |      |           |      | 1                | 1.0           | .02  | 3906           | 1    | 1.0           | .05            |                                    |  |  |  |  |  |  |  |  |
| 195              |            | 71ST                  | .5                          | <del>TRANSIT</del> |                      |      |           |      |                  |               |      |                |      |               |                | SKILL 9-10                         |  |  |  |  |  |  |  |  |
|                  |            |                       |                             | SETUP              |                      |      |           |      | 1                | 1.0           | .02  |                |      |               |                |                                    |  |  |  |  |  |  |  |  |
|                  |            |                       |                             | PROCESS            |                      |      |           |      | 1                | 1.0           | .02  | BEN15          | 1    | 1.0           | .04            |                                    |  |  |  |  |  |  |  |  |
| 200              |            | 71ST                  | .50                         | <del>TRANSIT</del> |                      |      |           |      |                  |               |      |                |      |               |                | SKILL 9-10                         |  |  |  |  |  |  |  |  |
|                  |            |                       |                             | <del>SETUP</del>   |                      |      |           |      |                  |               |      |                |      |               |                |                                    |  |  |  |  |  |  |  |  |
|                  |            |                       |                             | PROCESS            |                      |      |           |      | 1                | 1.0           | .02  | BEN2           | 1    | 1.0           | .02            |                                    |  |  |  |  |  |  |  |  |
| 203              |            | 71ST                  | .50                         | <del>TRANSIT</del> |                      |      |           |      |                  |               |      |                |      |               |                | SKILL 9-10                         |  |  |  |  |  |  |  |  |
|                  |            |                       |                             | SETUP              |                      |      |           |      | 1                | 1.0           | .02  |                |      |               |                |                                    |  |  |  |  |  |  |  |  |
|                  |            |                       |                             | PROCESS            |                      |      |           |      | 1                | 1.0           | .08  | 3953           | 1    | 1.0           | .10            |                                    |  |  |  |  |  |  |  |  |
| 205              | MAT<br>PCM | MAH                   | .35                         | <del>TRANSIT</del> |                      |      |           |      |                  |               |      |                |      |               |                | SKILL 9-10<br>3906<br>20% FLOW HRS |  |  |  |  |  |  |  |  |
|                  |            |                       |                             | <del>SETUP</del>   |                      |      |           |      |                  |               |      |                |      |               |                |                                    |  |  |  |  |  |  |  |  |
|                  |            |                       |                             | PROCESS            |                      |      |           |      |                  |               |      |                |      |               |                |                                    |  |  |  |  |  |  |  |  |



# OPERATION PROFILE

| NAME <u>Packer</u> |         | ALC                   | OC                          | DATE           | 05/18/89               | RCC              | MAT PCA | SHEET 2 OF 10   |      |                      |                 |      |     |            |                                  |
|--------------------|---------|-----------------------|-----------------------------|----------------|------------------------|------------------|---------|-----------------|------|----------------------|-----------------|------|-----|------------|----------------------------------|
| PCN <u>98001A</u>  |         | WCD <u>CAFCQ7A</u>    |                             | WCD DATE       |                        | 5/10/88          |         |                 |      |                      |                 |      |     |            |                                  |
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS % | MANPOWER         |         | EQUIPMENT       |      | DATA SOURCE COMMENTS |                 |      |     |            |                                  |
|                    |         |                       |                             |                |                        | SKILL CODE/LEVEL | QTY.    | TIME REQUIRED % | QTY. |                      | TIME REQUIRED % | HRS. |     |            |                                  |
| 207                | MAT PCA | PROC                  | .50                         | PROCESS        | -                      | -                | BY10    | 1               | 1.0  | .07                  | 1               | 1.0  | .07 | SK 11 9-10 |                                  |
| 208                | MAT PIW | WEID                  | .50                         | PROCESS        | 1.0                    | 240              | -       | -               | -    | -                    | -               | -    | -   |            |                                  |
| 209                | MAT PCA | TEST                  | .50                         | SETUP          | -                      | -                | BY10    | 1               | 1.0  | .05                  | -               | -    | -   |            |                                  |
|                    |         |                       |                             | PROCESS        | -                      | -                | -       | 1               | 1.0  | .03                  | 4060            | 1    | 1.0 | .08        | SK 11 9-10<br>Adjust and replace |
| 210                |         | ASSY                  | .50                         | PROCESS        | -                      | -                | -       | 1               | 1.0  | .50                  | BEN2            | 1    | 1.0 | .50        | SK 11 9-10                       |
| 230                |         | ASSY                  | .50                         | PROCESS        | -                      | -                | -       | 1               | 1.0  | .50                  | BEN2            | 2    | 1.0 | .50        | SK 11 9-10                       |



# OPERATION . . . PROFILE

| NAME <u>Parker</u> |            | ALC <u>OC</u>         |                             | DATE <u>5/8/89</u>    |                      | RCC <u>MAT NCA</u> |          | SHEET <u>8</u> OF <u>10</u> |           |      |                    |                      |      |                               |
|--------------------|------------|-----------------------|-----------------------------|-----------------------|----------------------|--------------------|----------|-----------------------------|-----------|------|--------------------|----------------------|------|-------------------------------|
| PIN <u>98001A</u>  |            | WCD <u>CAECO7A</u>    |                             | WCD DATE <u>89088</u> |                      |                    |          |                             |           |      |                    |                      |      |                               |
| OPERATION NUMBER   | RCC        | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW HOURS |                    | MANPOWER |                             | EQUIPMENT |      | TIME REQUIRED HRS. | DATA SOURCE COMMENTS |      |                               |
|                    |            |                       |                             |                       | %                    | HRS.               | QTY.     | SKILL CODE/LEVEL            | %         | HRS. |                    |                      | QTY. | EQUIPMENT CODE                |
| 240                | MAT<br>PCA | PROC                  | .50                         | PROCESS               | 1.0                  | 4.75               | 1        | BV10                        | 1.0       | 1.0  | 2758               | 1                    | 4.75 | SKILL 9-10<br>Drying in oven  |
| 250                |            | PROC                  | .50                         | PROCESS               |                      |                    | 1        |                             | 1.0       | 1.0  |                    | 1                    |      | SKILL 9-10<br>fill with resin |
| 260                |            | PROC                  | .50                         | PROCESS               |                      |                    | 1        |                             | 1.0       | 1.0  | BENZ               | 1                    | 1.8  | SKILL 9-10<br>Baking in oven  |
| 265                |            | Test                  | .50                         | PROCESS               | 1.0                  | 4.75               | 1        |                             | 1.0       | 1.0  | 2758               | 1                    | 4.75 | SKILL 9-10                    |
| 270                | MAT<br>PIW | WEID                  | .50                         | PROCESS               |                      |                    | 1        |                             | 1.0       | 1.0  | 3906               | 1                    | 1.06 | SKILL 9-10                    |



# OPERATION PROFILE

| NAME <u>Parker</u> ALC <u>OC</u> DATE <u>5/8/89</u> RCC <u>MAT PCA</u> SHEET <u>9</u> OF <u>10</u> |         | WCD <u>CAEC02A</u> WCD DATE <u>890828</u> |                             |                |                        |                           |                  |           |                 |                    |                 |                    |                      |                |  |
|--|---------|---|-----------------------------|----------------|------------------------|---------------------------|------------------|-----------|-----------------|--------------------|-----------------|--------------------|----------------------|----------------|--|
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION                     | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANPOWER               |                           |                  | EQUIPMENT |                 |                    | TIME REQUIRED % | TIME REQUIRED HRS. | DATA SOURCE COMMENTS |                |  |
|  |         |   |                             |                | MANDATORY FLOW HOURS % | MANDATORY FLOW HOURS HRS. | SKILL CODE/LEVEL | QTY.      | TIME REQUIRED % | TIME REQUIRED HRS. |                 |                    |                      | EQUIPMENT CODE | QTY.   |
| 275  | MAT PCA | PROC                                      | 50                          | PROCESS        | 1.0                    | 1.5                       | BY10             | 1         | 1.0             | 1.02               | OC# 2758        | 1                  | 1.0                  | 1.5            | apply machine and heat.  |
| 300  |         | PROC                                      | 50                          | PROCESS        | 1.0                    | 3.0                       |                  | 1         | 1.0             | 1.02               | OC# 2758        | 1                  | 1.0                  | 3.0            | presurization and continue to heat   |
| 305  |         | TEST                                      | 50                          | PROCESS        | 1.0                    | 3.0                       |                  | 1         | 1.0             | 1.03               | OC# 2758        | 1                  | 1.0                  | 3.0            | Test before paint. If done after and test fails, must scrub and paint off. |
| 310  |         | PAINT                                     | 1.0                         | PROCESS        | 1.0                    | 2.0                       | B307             | 1         | 1.0             | 1.3                | W59             | 1                  | 1.0                  | 2.0            | Paint plus primer. 2 hr. drying time.                                      |
| 340  |         | TEST                                      | 50                          | PROCESS        | 1.0                    | 2.0                       | B307             | 1         | 1.0             | 1.3                | W59             | 1                  | 1.0                  | 2.0            | Still with diameter 195.   |
|  |         |   |                             | PROCESS        | 1.0                    | 2.0                       | B307             | 1         | 1.0             | 1.3                | W59             | 1                  | 1.0                  | 2.0            | Still with diameter 195.   |



# OPERATION PROFILE

| NAME <u>Parker</u>              |            | ALC <u>OC</u>            |                                   | DATE <u>05/08/89</u>  |                              | RCC <u>MAT PCA</u>      |      | SHEET <u>10</u> OF <u>10</u> |                       |                   |                       |                         |            |
|---------------------------------|------------|--------------------------|-----------------------------------|-----------------------|------------------------------|-------------------------|------|------------------------------|-----------------------|-------------------|-----------------------|-------------------------|------------|
| PCH<br>NSN<br>PRI <u>98001A</u> |            | WCD <u>CAEC07A</u>       |                                   | WCD DATE <u>89092</u> |                              |                         |      |                              |                       |                   |                       |                         |            |
| OPERATION<br>NUMBER             | NCC        | OPERATION<br>DESCRIPTION | MANDATORY<br>OCCURRENCE<br>FACTOR | OPERATION<br>TYPE     | MAINPOWER                    |                         |      | EQUIPMENT                    |                       |                   | TIME REQUIRED<br>HRS. | DATA SOURCE<br>COMMENTS |            |
|                                 |            |                          |                                   |                       | MANDATORY<br>FLOW HOURS<br>% | SKILL<br>CODE/<br>LEVEL | QTY. | TIME REQUIRED<br>%           | TIME REQUIRED<br>HRS. | EQUIPMENT<br>CODE |                       |                         | QTY.       |
| 350                             | MAT<br>PCA | TEST                     | 50                                | SETUP                 | -                            | BV10                    | 1    | 1.0                          | .03                   | -                 | -                     | -                       |            |
|                                 |            |                          |                                   | PROCESS               | -                            |                         | 1    | 1.0                          | .03                   | 3906              | 1                     | 1.0                     | 5-10       |
| 360                             |            | PW                       | 1.0                               | PROCESS               | -                            |                         | 1    | 1.0                          | .17                   | -                 | -                     | -                       | SK-11 9-10 |
| 370                             |            | PW                       | 1.0                               | PROCESS               | -                            |                         | 1    | 1.0                          | .02                   | -                 | -                     | -                       | SK-11 9-10 |
| 380                             |            | PW                       | 1.0                               | PROCESS               | -                            |                         | 1    | 1.0                          | .02                   | -                 | -                     | -                       | SK-11 9-10 |
| 385                             |            | PW                       | 1.0                               | PROCESS               | -                            |                         | 1    | 1.0                          | .02                   | -                 | -                     | -                       | SK-11 9-10 |
| 9999                            |            | out                      | 1.0                               | PROCESS               | -                            |                         | 1    | 1.0                          | .02                   | -                 | -                     | -                       | SK-11 9-10 |



## FLOW PROCESS CHART

SUBJECT \_\_\_\_\_

DATE 05/06/89ITEM CODE  
PCN  
NSN  
P/N

98001A

WCD

CAEC07A

WCD DATE

8/14/8

CHART BEGINS

010

CHART ENDS

385

PREPARED BY \_\_\_\_\_

| OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS | DESCRIPTION | OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS | DESCRIPTION |
|------------------------|----------------|---------|-------------|------------------------|----------------|---------|-------------|
| 010                    | 010            | ○       | REC         | 209                    | -              | ○       | TEST        |
| 015                    | 015            | ○       | INFO        | 210                    | 210            | ○       | ASSY        |
| 018                    | -              | ○       | TEST        | 230                    | 230            | ○       | ASSY        |
| 020                    | 020            | ○       | MACH        | 240                    | 240            | ○       | PROC        |
| 030                    | 030            | ○       | DIS         | 250                    | 250            | ○       | PROC        |
| 040                    | 040            | ○       | CIN         | 260                    | 260            | ○       | PROC        |
| 050                    | 050            | ○       | INSP        | 265                    | -              | ○       | TEST        |
| 051                    | 051            | ○       | INSP        | 270                    | 270            | ○       | WEID        |
| 053                    | -              | ○       | ASSY        | 275                    | -              | ○       | PROC        |
| 055                    | 055            | ○       | WEID        | 300                    | 300            | ○       | PROC        |
| 060                    | 060            | ○       | TEST        | 305                    | -              | ○       | TEST        |
| 065                    | -              | ○       | MACH        | 310                    | 310            | ○       | Paint       |
| 070                    | 070            | ○       | WEID        | 340                    | 340            | ○       | TEST        |
| 080                    | 080            | ○       | TEST        | 350                    | 350            | ○       | TEST        |
| 090                    | 090            | ○       | TEST        | 360                    | 360            | ○       | PW          |
| 100                    | 100            | ○       | TEST        | 370                    | 370            | ○       | PW          |
| 110                    | 110            | ○       | TEST        | 380                    | 380            | ○       | PW          |
| 120                    | 120            | ○       | TEST        | 385                    | 385            | ○       | PW          |
| 130                    | 130            | ○       | TEST        |                        |                | ○       |             |
| 140                    | 140            | ○       | TEST        |                        |                | ○       |             |
| 150                    | 150            | ○       | TEST        |                        |                | ○       |             |
| 160                    | 160            | ○       | TEST        |                        |                | ○       |             |
| 170                    | 170            | ○       | DIS         |                        |                | ○       |             |
| 175                    | -              | ○       | TEST        |                        |                | ○       |             |
| 180                    | 180            | ○       | TEST        |                        |                | ○       |             |
| 190                    | 190            | ○       | TEST        |                        |                | ○       |             |
| 195                    | 195            | ○       | TEST        |                        |                | ○       |             |
| 200                    | 200            | ○       | TEST        |                        |                | ○       |             |
| 203                    | -              | ○       | TEST        |                        |                | ○       |             |
| 205                    | -              | ○       | MACH        |                        |                | ○       |             |
| 207                    | -              | ○       | PROC        |                        |                | ○       |             |
| 208                    | -              | ○       | WEID        |                        |                | ○       |             |

○ OPERATION

▽ STORAGE

□ INSPECTION

◇ TRANSPORTATION

D DELAY

LSC-20147



# OPERATION PROFILE

| NAME <u>J. CARTER</u> ALC <u>OC</u> DATE <u>4-27-82</u> RCC <u>MAT PCA</u> SHEET <u>1</u> OF <u>6</u> |            | WCD <u>CAEC 11</u> WCD DATE <u>89045</u> |                             |                |                                |                  |                  |                         |                   |      |                         |                           |
|---|------------|--|-----------------------------|----------------|--------------------------------|------------------|------------------|-------------------------|-------------------|------|-------------------------|---------------------------|
| OPERATION NUMBER  | RCC        | OPERATION DESCRIPTION                    | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANDATORY FLOW HOURS<br>% HRS. | SKILL CODE/LEVEL | MANPOWER<br>QTY. | TIME REQUIRED<br>% HRS. | EQUIPMENT<br>CODE | QTY. | TIME REQUIRED<br>% HRS. | DATA SOURCE COMMENTS      |
| 00  | MAT<br>PCA | IN                                       | 1.0                         | TRANSIT        | 1.0 30.9                       |                  |                  |                         |                   |      |                         |                           |
|   |            |  |                             | SETUP          |                                |                  |                  |                         |                   |      |                         |                           |
|   |            |  |                             | PROCESS        |                                |                  |                  |                         |                   |      |                         |                           |
| 010   | MAT<br>PCA | REC                                      | 1.000                       | TRANSIT        |                                | BY 10            |                  |                         |                   |      |                         | BENCH                     |
|   |            |  |                             | SETUP          |                                |                  |                  |                         |                   |      |                         |                           |
|   |            |  |                             | PROCESS        |                                |                  |                  |                         |                   |      |                         |                           |
| 015   |            | PH                                       | 1.000                       | TRANSIT        |                                |                  |                  |                         |                   |      |                         | BENCH                     |
|   |            |  |                             | SETUP          |                                |                  |                  |                         |                   |      |                         |                           |
|   |            |  |                             | PROCESS        |                                |                  |                  |                         |                   |      |                         |                           |
| 020   |            | DIS                                      | 1.000                       | TRANSIT        |                                |                  |                  |                         |                   |      |                         | BENCH                     |
|   |            |  |                             | SETUP          |                                |                  |                  |                         |                   |      |                         |                           |
|   |            |  |                             | PROCESS        |                                |                  |                  |                         |                   |      |                         |                           |
| 030   |            | CLN                                      | 1.000                       | TRANSIT        |                                |                  |                  |                         |                   |      |                         | CLEANING TANK - NO NUMBER |
|   |            |  |                             | SETUP          |                                |                  |                  |                         |                   |      |                         |                           |
|   |            |  |                             | PROCESS        |                                |                  |                  |                         |                   |      |                         |                           |
|   |            |  |                             |                |                                | BY 10            | 1                | 1.0                     | BENCH             | 1    | 1.0                     |                           |



# OPERATION PROFILE

| NAME <u>J. CARTER</u> ALC <u>OC</u> DATE <u>11-27-89</u> RCC <u>MAT PCA</u> SHEET <u>2</u> OF <u>4</u> |         | WCD <u>CAEC 11</u> WCD DATE <u>89045</u> |                             |                |                      |      |               |                |      |               |                      |    |  |
|--|---------|--|-----------------------------|----------------|----------------------|------|---------------|----------------|------|---------------|----------------------|----|--|
| OPERATION NUMBER   | RCC     | OPERATION DESCRIPTION                    | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANPOWER             |      |               | EQUIPMENT      |      |               | DATA SOURCE COMMENTS |    |  |
|  |         |  |                             |                | MANDATORY FLOW HOURS | QTY. | TIME REQUIRED | EQUIPMENT CODE | QTY. | TIME REQUIRED |                      |    |  |
|  |         |  |                             |                | %                    | HRS. | %             | HRS.           | %    | HRS.          |                      |    |  |
| 040  | MAT PCA | INSPECTION                               | 1.000                       | TRANSIT        | -                    | -    | -             | -              | -    | -             |                      |    |  |
|  |         |  |                             | SETUP          | -                    | -    | -             | -              | -    | -             | -                    | -  |  |
|  |         |  |                             | PROCESS        | -                    | -    | 1.0           | 10             | 3414 | 1             | 10                   | 10 |  |
| 060  |         | TEST                                     | 1.00                        | TRANSIT        | -                    | -    | -             | -              | -    | -             |                      |    |  |
|  |         |  |                             | SETUP          | -                    | -    | -             | -              | -    | -             | -                    | -  |  |
|  |         |  |                             | PROCESS        | -                    | -    | 1.0           | 20             | 4929 | 1             | 1.0                  | 20 |  |
| 070  |         | TEST                                     | 1.00                        | TRANSIT        | -                    | -    | -             | -              | -    | -             |                      |    |  |
|  |         |  |                             | SETUP          | -                    | -    | -             | -              | -    | -             | -                    | -  |  |
|  |         |  |                             | PROCESS        | -                    | -    | 1.0           | 10             | 4929 | 1             | 1.0                  | 10 |  |
| 070  |         | TEST                                     | 1.00                        | TRANSIT        | -                    | -    | -             | -              | -    | -             |                      |    |  |
|  |         |  |                             | SETUP          | -                    | -    | -             | -              | -    | -             | -                    | -  |  |
|  |         |  |                             | PROCESS        | -                    | -    | 1.0           | 10             | 4929 | 1             | 1.0                  | 10 |  |
| 080  |         | TEST                                     | 1.00                        | TRANSIT        | -                    | -    | -             | -              | -    | -             |                      |    |  |
|  |         |  |                             | SETUP          | -                    | -    | -             | -              | -    | -             | -                    | -  |  |
|  |         |  |                             | PROCESS        | -                    | -    | 1.0           | 10             | 4929 | 1             | 1.0                  | 10 |  |



# OPERATION PROFILE

| NAME <u>JACK CARTER</u> ALC <u>OC</u> DATE <u>4-27-89</u> RCC <u>MAT PCA</u> SHEET <u>3</u> OF <u>6</u> |         | WCD <u>CAEC11</u> WCD DATE <u>69045</u> |                             |                |                        |                  |      |                 |                    |                |                      |      |
|---|---------|---|-----------------------------|----------------|------------------------|------------------|------|-----------------|--------------------|----------------|----------------------|------|
| OPERATION NUMBER  | RCC     | OPERATION DESCRIPTION                   | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE | MANPOWER               |                  |      | EQUIPMENT       |                    |                | DATA SOURCE COMMENTS |      |
|   |         |   |                             |                | MANDATORY FLOW HOURS % | SKILL CODE/LEVEL | QTY. | TIME REQUIRED % | TIME REQUIRED HRS. | EQUIPMENT CODE |                      | QTY. |
| 090   | MAT PCA | TEST                                    | 1.00                        | TRANSIT        | -                      | -                | -    | -               | -                  | -              | -                    | -    |
|   |         |   |                             | SETUP          | -                      | -                | -    | -               | -                  | -              | -                    | -    |
|   |         |   |                             | PROCESS        | -                      | -                | -    | -               | -                  | -              | -                    | -    |
| 100   | PCA     | TEST                                    | 1.00                        | TRANSIT        | -                      | -                | -    | -               | -                  | -              | -                    | -    |
|   |         |   |                             | SETUP          | -                      | -                | -    | -               | -                  | -              | -                    | -    |
|   |         |   |                             | PROCESS        | -                      | -                | -    | -               | -                  | -              | -                    | -    |
| 110   | PCA     | TEST                                    | 1.00                        | TRANSIT        | -                      | -                | -    | -               | -                  | -              | -                    | -    |
|   |         |   |                             | SETUP          | -                      | -                | -    | -               | -                  | -              | -                    | -    |
|   |         |   |                             | PROCESS        | -                      | -                | -    | -               | -                  | -              | -                    | -    |
| 120   | PCA     | TEST                                    | 1.00                        | TRANSIT        | -                      | -                | -    | -               | -                  | -              | -                    | -    |
|   |         |   |                             | SETUP          | -                      | -                | -    | -               | -                  | -              | -                    | -    |
|   |         |   |                             | PROCESS        | -                      | -                | -    | -               | -                  | -              | -                    | -    |
| 380   | PCA     | REP                                     | 1.00                        | TRANSIT        | -                      | -                | -    | -               | -                  | -              | -                    | -    |
|   |         |   |                             | SETUP          | -                      | -                | -    | -               | -                  | -              | -                    | -    |
|   |         |   |                             | PROCESS        | -                      | -                | -    | -               | -                  | -              | -                    | -    |



# OPERATIC PROFILE

| NAME <u>J. CARTER</u> |         | ALC <u>OC</u>         |                             | DATE <u>4/24/89</u>   |                      | RCC <u>MAT PCA</u> |          | SHEET <u>4</u> OF <u>6</u> |           |                |                 |   |   |
|-----------------------|---------|-----------------------|-----------------------------|-----------------------|----------------------|--------------------|----------|----------------------------|-----------|----------------|-----------------|---|---|
| PIN <u>98093A</u>     |         | WCD <u>CAEC11</u>     |                             | WCD DATE <u>89045</u> |                      |                    |          |                            |           |                |                 |   |   |
| OPERATION NUMBER      | RCC     | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW HOURS |                    | MANPOWER |                            | EQUIPMENT |                | TIME REQUIRED % | TIME REQUIRED HRS.                            | DATA SOURCE COMMENTS                      |
|                       |         |                       |                             |                       | %                    | HRS.               | QTY.     | SKILL CODE/ LEVEL          | QTY.      | EQUIPMENT CODE |                 |   |   |
| 390                   | MAT PCA | ASSY                  | 1.0                         | TRANSIT               | -                    | -                  | -        | -                          | -         | -              | -               | -   | COMBINED WITH OP 440 PER ACT FAB. METHOD. |
|                       |         |                       |                             | SETUP                 | -                    | -                  | -        | -                          | -         | -              | -               | -   |   |
|                       |         |                       |                             | PROCESS               | -                    | -                  | -        | -                          | -         | -              | -               | -   |   |
| 460                   |         | TEST                  | 1.0                         | TRANSIT               | -                    | -                  | -        | -                          | -         | -              | -               | TEST BENCH                                    |   |
|                       |         |                       |                             | SETUP                 | -                    | -                  | -        | -                          | -         | -              | -               |   | -   |
|                       |         |                       |                             | PROCESS               | -                    | -                  | -        | -                          | -         | -              | -               |   | -   |
| 520                   |         | BAKE                  | 1.0                         | TRANSIT               | -                    | -                  | -        | -                          | -         | -              | -               | EPOXY FILL & OVEN BAKE                        |   |
|                       |         |                       |                             | SETUP                 | -                    | -                  | -        | -                          | -         | -              | -               |   | -   |
|                       |         |                       |                             | PROCESS               | 1.0                  | 3.0                | 1        |                            | 1.0       | 1              | 1.0             |   | .75                                       |
| 525                   |         | ASSY                  | 1.0                         | TRANSIT               | -                    | -                  | -        | -                          | -         | -              | -               | NOTE : CASE IS SOLDERED. SEALED AT THIS OPER. |   |
|                       |         |                       |                             | SETUP                 | -                    | -                  | -        | -                          | -         | -              | -               |   | -   |
|                       |         |                       |                             | PROCESS               | -                    | -                  | -        | -                          | -         | -              | -               |   | -   |
| 530                   |         | TEST                  | 1.0                         | TRANSIT               | -                    | -                  | -        | -                          | -         | -              | -               |   |   |
|                       |         |                       |                             | SETUP                 | -                    | -                  | -        | -                          | -         | -              | -               |   | -   |
|                       |         |                       |                             | PROCESS               | -                    | -                  | -        | -                          | -         | -              | -               |   | -   |



# OPERATION PROFILE

NAME Carter ALC OC DATE 4/24/89 RCC MAT PCA SHEET 5 OF 6

| WCD CAECU           |            |                          |                                   |                   |                         |      |                         |          |     |           |            |               |      | WCD DATE 89045  |     |  |  |
|---------------------|------------|--------------------------|-----------------------------------|-------------------|-------------------------|------|-------------------------|----------|-----|-----------|------------|---------------|------|---|-----|--|--|
| OPERATION<br>NUMBER | NCC        | OPERATION<br>DESCRIPTION | MANDATORY<br>OCCURRENCE<br>FACTOR | OPERATION<br>TYPE | MANDATORY<br>FLOW HOURS |      | SKILL<br>CODE/<br>LEVEL | MANPOWER |     | EQUIPMENT |            | TIME REQUIRED |      | DATA SOURCE<br>COMMENTS   |     |  |  |
|                     |            |                          |                                   |                   | %                       | HRS. |                         | QTY.     | %   | HRS.      | QTY.       | %             | HRS. |   |     |  |  |
| 540                 | MAT<br>PCA | TEST                     | 1.00                              | TRANSIT           | —                       | —    | BY 10                   | —        | —   | —         | —          | —             | —    |   |     |  |  |
|                     |            |                          |                                   | SETUP             | —                       | —    |                         | —        | —   | —         | —          | —             |      |   |     |  |  |
|                     |            |                          |                                   | PROCESS           | 1.0                     | .5   |                         | 1        | 1.0 | .10       | OC-3953    | 1             | 1.0  |   | .5  |  |  |
| 560                 |            | PROC                     | 1.00                              | TRANSIT           | 1.0                     | .20  |                         | —        | —   | —         | —          | —             | —    | PAINT BOOTH<br>RELOCATE<br>FOR<br>LOGISTICS<br><br>NO NUMBER<br>PAINT BOOTH |     |  |  |
|                     |            |                          |                                   | SETUP             | —                       | —    |                         | —        | 1.0 | .2        | —          | —             | —    |   | —   |  |  |
|                     |            |                          |                                   | PROCESS           | 1.0                     | 4.0  |                         | 1        | 1.0 | .3        | W53        | 1             | 1.0  |   | .75 |  |  |
| 570                 |            | TEST                     | 1.00                              | TRANSIT           | —                       | —    |                         | —        | —   | —         | —          | —             | —    | ELEC TEST<br>BENCH  |     |  |  |
|                     |            |                          |                                   | SETUP             | —                       | —    |                         | —        | —   | —         | —          | —             | —    |   | —   |  |  |
|                     |            |                          |                                   | PROCESS           | —                       | —    |                         | 1        | 1.0 | .15       | OC<br>4929 | 1             | 1.0  |   | .15 |  |  |
| 650                 |            | PROC                     | 1.00                              | TRANSIT           | —                       | —    |                         | —        | —   | —         | —          | —             | —    | INSTALL<br>SAFETY<br>WIRE   |     |  |  |
|                     |            |                          |                                   | SETUP             | —                       | —    |                         | —        | —   | —         | —          | —             | —    |   | —   |  |  |
|                     |            |                          |                                   | PROCESS           | —                       | —    |                         | 1        | 1.0 | .05       | BENCH      | 1             | 1.0  |   | .05 |  |  |
| 670                 | MAT<br>PCA | PH                       | 1.00                              | TRANSIT           | —                       | —    |                         | —        | —   | —         | —          | —             | —    |   |     |  |  |
|                     |            |                          |                                   | SETUP             | —                       | —    |                         | —        | —   | —         | —          | —             | —    |   | —   |  |  |
|                     |            |                          |                                   | PROCESS           | —                       | —    |                         | —        | —   | —         | —          | —             | —    |   | —   |  |  |
|                     |            |                          |                                   | TRANSIT           | —                       | —    | BY 10                   | —        | —   | —         | —          | —             | —    |   |     |  |  |
|                     |            |                          |                                   | SETUP             | —                       | —    |                         | —        | —   | —         | —          | —             | —    |   | —   |  |  |
|                     |            |                          |                                   | PROCESS           | —                       | —    |                         | 1        | 1.0 | .1        | BENCH      | 1             | 1.0  |   | .10 |  |  |



# OPERATION PROFILE

| NAME <u>J. CARTER</u> |         | ALC <u>OC</u>         |                              | DATE <u>4-27-89</u>   |              | RCC <u>MAT PCA</u> |               | SHEET <u>6</u> OF <u>6</u> |                      |
|-----------------------|---------|-----------------------|------------------------------|-----------------------|--------------|--------------------|---------------|----------------------------|----------------------|
| PHI <u>98093A</u>     |         | WCD <u>CAEC II</u>    |                              | WCD DATE <u>89045</u> |              |                    |               |                            |                      |
| OPERATION NUMBER      | RCC     | OPERATION DESCRIPTION | LABORATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANIPULATION |                    | EQUIPMENT     |                            | DATA SOURCE COMMENTS |
|                       |         |                       |                              |                       | MANIPULATION | EQUIPMENT          | TIME REQUIRED | TIME REQUIRED              |                      |
|                       |         |                       |                              |                       | QTY.         | %                  | QTY.          | %                          |                      |
| SBO                   | MAT PCA | PH                    | 1.0                          | TRANSIT               | -            | -                  | -             | -                          |                      |
|                       |         |                       |                              | SETUP                 | -            | -                  | -             | -                          |                      |
|                       |         |                       |                              | PROCESS               | -            | -                  | -             | -                          |                      |
| 9999                  | }       | OUT                   | 1.0                          | TRANSIT               | 1.0          | 1.0                | 1.0           | 1.0                        |                      |
|                       |         |                       |                              | SETUP                 | -            | -                  | -             | -                          |                      |
|                       |         |                       |                              | PROCESS               | -            | -                  | -             | -                          |                      |
|                       |         |                       |                              | TRANSIT               | -            | -                  | -             | -                          |                      |
|                       |         |                       |                              | SETUP                 | -            | -                  | -             | -                          |                      |
|                       |         |                       |                              | PROCESS               | -            | -                  | -             | -                          |                      |
|                       |         |                       |                              | TRANSIT               | -            | -                  | -             | -                          |                      |
|                       |         |                       |                              | SETUP                 | -            | -                  | -             | -                          |                      |
|                       |         |                       |                              | PROCESS               | -            | -                  | -             | -                          |                      |
|                       |         |                       |                              | TRANSIT               | -            | -                  | -             | -                          |                      |
|                       |         |                       |                              | SETUP                 | -            | -                  | -             | -                          |                      |
|                       |         |                       |                              | PROCESS               | -            | -                  | -             | -                          |                      |
|                       |         |                       |                              | TRANSIT               | -            | -                  | -             | -                          |                      |
|                       |         |                       |                              | SETUP                 | -            | -                  | -             | -                          |                      |
|                       |         |                       |                              | PROCESS               | -            | -                  | -             | -                          |                      |



## FLOW PROCESS CHART

SUBJECT 98093ADATE 5-6-89

ITEM CODE

PCN  
MMN  
PMWCD CAEC11WCD DATE 89045CHART BEGINS OP 010CHART ENDS OP 680

PREPARED BY

| OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS | DESCRIPTION | OP. PROFILE<br>OP. NO. | WCD<br>OP. NO. | SYMBOLS | DESCRIPTION |
|------------------------|----------------|---------|-------------|------------------------|----------------|---------|-------------|
| 010                    | 010            | ●○○□▽   | REC         | 530                    | 570            | ●○○□▽   | TEST        |
| 015                    | 015            | ●○○□▽   | PW          | 540                    | 580            | ●○○□▽   |             |
| 020                    | 020            | ●○○□▽   | DISASSEMB   | 560                    | 590            | ●○○□▽   | PAINT       |
|                        | 025            | ○○○□▽   | REPAIR      |                        | 595            | ●○○□▽   |             |
| 030                    | 030            | ●○○□▽   | CLEAN       | 570                    | 610            | ●○○□▽   | TEST        |
|                        | 040            | ●○○□▽   | INSP        | 670                    | 670            | ●○○□▽   | PW          |
| 060                    | 060            | ○○○□▽   | TEST        | 650                    | 680            | ●○○□▽   | SAF. WIRE   |
|                        | 100            | ○○○□▽   | TEST        | 660                    | 690            | ●○○□▽   | PW          |
| 070                    | 160            | ○○○□▽   | TEST        |                        | 700            | ●○○□▽   |             |
| 080                    | 210            | ○○○□▽   | TEST        | 680                    | 710            | ●○○□▽   | PW          |
|                        | 220            | ○○○□▽   | TEST        |                        |                | ○○○□▽   |             |
|                        | 270            | ○○○□▽   | TEST        |                        |                | ○○○□▽   |             |
| 090                    | 290            | ●○○□▽   | TEST        |                        |                | ○○○□▽   |             |
|                        | 300            | ○○○□▽   | TEST        |                        |                | ○○○□▽   |             |
|                        | 310            | ○○○□▽   | TEST        |                        |                | ○○○□▽   |             |
| 100                    | 320            | ●○○□▽   | TEST        |                        |                | ○○○□▽   |             |
|                        | 330            | ○○○□▽   |             |                        |                | ○○○□▽   |             |
|                        | 350            | ○○○□▽   |             |                        |                | ○○○□▽   |             |
|                        | 360            | ○○○□▽   |             |                        |                | ○○○□▽   |             |
| 120                    | 380            | ●○○□▽   | TEST        |                        |                | ○○○□▽   |             |
| 380                    | 400            | ●○○□▽   | REPAIR      |                        |                | ○○○□▽   |             |
|                        | 415            | ○○○□▽   |             |                        |                | ○○○□▽   |             |
|                        | 450            | ○○○□▽   |             |                        |                | ○○○□▽   |             |
| 390                    | 480            | ●○○□▽   | REASS       |                        |                | ○○○□▽   |             |
|                        | 490            | ○○○□▽   |             |                        |                | ○○○□▽   |             |
| 460                    | 500            | ●○○□▽   | TEST        |                        |                | ○○○□▽   |             |
| 520                    | 540            | ●○○□▽   | PORT BAKE   |                        |                | ○○○□▽   |             |
|                        | 550            | ○○○□▽   |             |                        |                | ○○○□▽   |             |
| 525                    | 560            | ●○○□▽   | SOLDER CASE |                        |                | ○○○□▽   |             |
|                        | 565            | ○○○□▽   |             |                        |                | ○○○□▽   |             |
|                        |                | ○○○□▽   |             |                        |                | ○○○□▽   |             |

○ OPERATION

▽ STORAGE

□ INSPECTION

◇ TRANSPORTATION

D DELAY

LSC-20147



### **5.1 PROFILE DATA FILES**

The profile data files for RCC MATPCA were previously submitted under memo number NKE-E016-7643, dated August 28, 1989.



## **5.2 MODEL INPUT FILES**

The model input files for RCC MATPCA were previously submitted under memo number NKE-E016-7643, dated August 28, 1989.



## **6.0 VALIDATION OF INPUT DATA**

All profile data was validated in accordance with paragraph 7.2 and 7.3 of the Simulation Model Definition Document (SMDD). The profile data files included in this document were validated and accurately represent MATPCA.



## **7.0 COMPUTER SIMULATION ANALYSIS OF RCC**

The computer simulation analysis for RCC MATPCA was previously submitted under memo number NKE-E016-7643, dated August 28, 1989.



## **8.0 VALIDATION OF SIMULATION ANALYSIS**

The validation of simulation analysis for RCC MATPCA was previously submitted under memo number NKE-E016-7643, dated August 28, 1989.



## **9.0 BRAINSTORMING**

The minutes for RCC MATPCA brainstorming were previously submitted under memo number NKE-E016-7643, dated August 28, 1989.



## 10.0 EXPERIMENTATION

Experimentation is the process by which the factors and levels developed in brainstorming are tested for interaction and effect. The factors and levels identified are fitted into a Taguchi orthogonal array, which then defines the experimental design. Changes in quality characteristics, such as throughput and/or simulated process flow times, are then analyzed as experimental results. Taguchi methodology is used in performing this analysis.

It is important to understand the process by which experimentation is developed if useful information is to be obtained. For this reason, the following discussion will attempt to define certain terms, approaches, and desired results in regard to the experimentation process.

It is often the case that technical information needed for making a decision regarding a process or product is unknown. Since this information is in most cases needed as quickly and inexpensively as possible, the Taguchi method of using fractional factorials in the form of orthogonal arrays is considered a method of choice.

Two terms require definition due to their fundamental importance in developing and interpreting the orthogonal array. A factor is a parameter purposefully altered so that resulting changes in the output variable may be observed. Levels are the different settings for each factor in a designed experiment.

The advantages of using orthogonal arrays are: ~~that~~ The main effects of factors under test are balanced and separable, the number of experiments required is greatly reduced, and the ease with which test planning and data analysis may be performed. This allows the arrays to be applied to a broad spectrum of problem identification and analysis.

Test matrices developed by Dr. Taguchi, et al, are applied to the orthogonal array for which it is applicable. Mathematical analysis of the quality characteristic chosen is then accomplished using the test matrices to find the best combination of factors and levels. The convention for identification of test matrices is as follows:

Where  $N = \text{number of experimental runs}$   $L_n(J^k)$   $\leftarrow$  capital J  
 $J = \text{number of levels}$



**K = maximum number of factors that may be included in test.**

Two factors are said to interact (in their effect on the output variable) if the effect of one factor is different at the different levels of another factor. If two factors physically interact, that effect can be identified in the test results.

***Control***

A note on noise: ~~Noise~~ control factors are those factors easily adjusted during product design and process design. Noise factors are ~~these~~ factors which are difficult or impossible to adjust during production or customer use. Selection of those factors easiest to adjust is the best procedure when test planning begins. Because the UDOS 2.0 model produces noise-free output (100% reproducible), only control factors are included in model experimental designs.

It is important to remember that for the effective use of the UDOS 2.0 simulation model for experimental simulation analysis, the correct factors and levels must be identified and developed during initial test planning. The model allows a comparative analysis of the selected factors and levels, with identification of the best combination of these. It must be remembered that this may not be the optimal solution to a process or product problem, the factors and levels of which may not have been defined.

Numerous works have been produced regarding the use of Taguchi analysis in problem identification and solving in industrial settings. The reader is encouraged to examine this material, including the fundamental work of Dr. Taguchi, for specific applications and techniques.



## 10.1 MATPCA EXPERIMENTATION RESULTS

A statistical analysis was performed on throughput and flow time (actual vs. simulated) for the validated model run. The results of this analysis are shown in Tables 10-1 and 10-2. These results form a baseline to which the quality characteristics from the experimental model runs are compared.

The orthogonal array developed during brainstorming is shown in table 10-3. It lists the factors and levels which will form the experimental design. The use of this array reduces the number of experimental runs from 81 to nine. The experimental runs are performed on the UDOS 2.0 model using the existing (AS-IS) conditions for FY88. Note that due to the fact that throughput was 100% for all experimental runs, it is now necessary to use average simulated flow time as the quality characteristic for comparative analysis. Table 10-4 gives the result of this analysis, beginning with the average flow times of each experimental run and showing the interaction among factors and levels. The Taguchi test matrix is shown to the right of these listings. The optimal configuration is given as:

|         |   |   |   |   |
|---------|---|---|---|---|
| FACTOR: | A | B | C | D |
| LEVEL:  | 1 | 3 | 1 | 1 |

This configuration is interpreted as the following: (1) Add one OC 3906 Jet Ignition Tester on first shift, (2) Add two welders on first and second shifts, (3) Add one OC 4286 Temperature Amplifier Test Stand on first shift, and (4) Add one BY09 skill code position to first shift. Note that the average savings in flow time is a (simulated) 243.64 vs.



302.16 hours for the AS-IS condition. This savings in flow time would need to be compared against the cost of implementing these changes. The justification of expenditures for these changes might be more applicable if applied to surge conditions, when this reduction in flow time might prove more valuable.

The detailed results of these runs by PCN may be found in appendix A. The computer generated analysis sheets contained in appendix A, which is formed from a LOTUS 123 spreadsheet program, contain an extensive Taguchi analysis using the quality characteristics of Throughput (simulated vs. actual) and Simulated Flow Time.

## 10.2 SURGE ANALYSIS

Surge production capability for this RCC was performed by running a model Usage Report using the FY88 data with the surge conditions for various weapons systems as reported by ALC Headquarters. The usage report was adjusted to show the surge conditions for manpower and equipment of a seven day work week and two twelve hour shifts. The analysis of this data shows that MATPCA is a robust production area, well able to meet projected surge conditions with the present level of manpower and equipment. It should be mentioned that the existing level of experience and expertise may be directly affecting the throughput and flow hours shown, and any change to personnel or equipment needs could have an effect on surge capability.



**MATPCA ELECTRICAL ACCESSORIES  
THROUGHPUT STATISTICAL ANALYSIS**  
**TABLE ~~ONE~~ 10-1**

| PART CONTROL<br>NUMBER (PCN) | SIMULATED | FY 88 ACTUALS | % VARIANCE<br>(SIM /ACTUALS) |
|------------------------------|-----------|---------------|------------------------------|
| 30056A                       | 86        | 87            | -1%                          |
| 30241A                       | 574       | 523           | 9%                           |
| 31151A                       | 326       | 327           | -.31%                        |
| 34044A                       | 159       | 158           | 1%                           |
| 34128A                       | 590       | 586           | 1%                           |
| 34252A                       | 126       | 126           | 0%                           |
| 34253A                       | 755       | 758           | -.40%                        |
| 34551A                       | 105       | 103           | 2%                           |
| 35023A                       | 258       | 255           | 1%                           |
| 35111A                       | 114       | 114           | 0%                           |
| 35113A                       | 137       | 136           | 1%                           |
| 35510A                       | 68        | 65            | 4%                           |
| 37719A                       | 493       | 488           | 1%                           |
| 38643A                       | 143       | 136           | 5%                           |
| 38645A                       | 299       | 268           | 10%                          |
| 38669A                       | 147       | 148           | -1%                          |
| 38694A                       | 287       | 289           | -1%                          |
| 38718A                       | 371       | 369           | 1%                           |
| 49315A                       | 1016      | 1000          | 2%                           |
| 49711A                       | 236       | 231           | 2%                           |
| 50217A                       | 14        | 14            | 0%                           |
| 50078A                       | 161       | 160           | 1%                           |
| 97133A                       | 141       | 141           | 0%                           |
| 98001A                       | 94        | 92            | 2%                           |
| 98093A                       | 504       | 501           | 1%                           |
| 61234A                       | 104       | 105           | -1%                          |
| SHOP AVERAGE                 | 7,308     | 7,180         | 2%                           |

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**MATPCA ELECTRICAL ACCESSORIES  
FLOW HOURS STATISTICAL ANALYSIS**  
**TABLE 6-2-2 10-2**

| PART CONTROL<br>NUMBER (PCN) | SIMULATED | G-019-C | % VARIANCE<br>(SIM /ACTUALS) |
|------------------------------|-----------|---------|------------------------------|
| 30056A                       | 78.81     | 408     | -81%                         |
| 30241A                       | 269.95    | 264     | 2%                           |
| 31151A                       | 51.72     | 264     | -80%                         |
| 34044A                       | 172.72    | 216     | -20%                         |
| 34128A                       | 1204.78   | 240     | 80%                          |
| 34252A                       | 91.75     | 168     | -45%                         |
| 34253A                       | 163.91    | 168     | -2%                          |
| 34551A                       | 318.92    | 312     | 2%                           |
| 35023A                       | 298.99    | 360     | -17%                         |
| 35111A                       | 75.22     | 192     | -61%                         |
| 35113A                       | 131.44    | 192     | -32%                         |
| 35510A                       | 163.08    | 312     | -48%                         |
| 37719A                       | 125.24    | 192     | -35%                         |
| 38643A                       | 187.46    | 192     | -2%                          |
| 38645A                       | 1191.08   | 192     | 84%                          |
| 38669A                       | 154.79    | 312     | -50%                         |
| 38694A                       | 108.86    | 216     | -50%                         |
| 38718A                       | 281.85    | 336     | -16%                         |
| 49315A                       | 1115.23   | 240     | 78%                          |
| 49711A                       | 445.84    | 216     | 52%                          |
| 50217A                       | 318.84    | 192     | 40%                          |
| 50078A                       | 115.02    | 192     | -40%                         |
| 97133A                       | 86.84     | 288     | -70%                         |
| 98001A                       | 338.83    | 360     | 6%                           |
| 98093A                       | 193.42    | 336     | -42%                         |
| 81234A                       | 126.77    | 192     | -34%                         |
| SHOP AVERAGE                 | 302.16    | 252.0   | 17%                          |

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# MATPCA L<sub>3</sub>(3') TAGUCHI ORTHOGONAL ARRAY THROUGHPUT EXPERIMENTAL RESULTS - FY 90

TABLE 10-3

| EXP # | EQUIPMENT QUANTITY         | BACKSHOP                              | EQUIPMENT QUANTITY                        | MANPOWER ASSIGNED                         | NORMAL WORKLOAD |               |               |
|-------|----------------------------|---------------------------------------|---|---|-----------------|---------------|---------------|
|       |                            |                                       |   |   | AVG             | BEST          | WORST         |
| 1     | ADD 1<br>OC 3006           | 3 WELDERS<br>ON 1 <sup>st</sup> SHIFT | ADD 1 OC 4206<br>ON 1 <sup>st</sup> SHIFT | ADD 1 CODE BY<br>ON 1 <sup>st</sup> SHIFT | 100%            | 20120A<br>90% | 40711A<br>90% |
| 2     | ADD 1<br>OC 3006           | 4 WELDERS<br>ON 1 <sup>st</sup> SHIFT | ADD 2 OC 4206<br>ON 1 <sup>st</sup> SHIFT | ADD 2 CODE BY<br>ON 1 <sup>st</sup> SHIFT | 100%            | 40010A<br>90% | 40711A<br>90% |
| 3     | ADD 1<br>OC 3006           | 2 WELDERS<br>ON 1 <sup>st</sup> SHIFT | USE OC 4206<br>ON 2 <sup>nd</sup> SHIFT   | ADD 4 CODE BY<br>ON 1 <sup>st</sup> SHIFT | 100%            | 40010A<br>90% | 40711A<br>90% |
| 4     | ADD 2<br>OC 3006           | 3 WELDERS<br>ON 1 <sup>st</sup> SHIFT | ADD 2 OC 4206<br>ON 1 <sup>st</sup> SHIFT | ADD 4 CODE BY<br>ON 1 <sup>st</sup> SHIFT | 99%             | 20040A<br>90% | 40711A<br>90% |
| 5     | ADD 2<br>OC 3006           | 4 WELDERS<br>ON 1 <sup>st</sup> SHIFT | USE OC 4206<br>ON 2 <sup>nd</sup> SHIFT   | ADD 1 CODE BY<br>ON 1 <sup>st</sup> SHIFT | 100%            | 40010A<br>90% | 40711A<br>90% |
| 6     | ADD 2<br>OC 3006           | 2 WELDERS<br>ON 1 <sup>st</sup> SHIFT | ADD 1 OC 4206<br>ON 1 <sup>st</sup> SHIFT | ADD 2 CODE BY<br>ON 1 <sup>st</sup> SHIFT | 100%            | 40010A<br>90% | 40711A<br>90% |
| 7     | 1 OC 3006<br>WITH 1/2 TIME | 3 WELDERS<br>ON 1 <sup>st</sup> SHIFT | USE OC 4206<br>ON 2 <sup>nd</sup> SHIFT   | ADD 2 CODE BY<br>ON 1 <sup>st</sup> SHIFT | 100%            | 40010A<br>90% | 40711A<br>90% |
| 8     | 1 OC 3006<br>WITH 1/2 TIME | 4 WELDERS<br>ON 1 <sup>st</sup> SHIFT | ADD 1 OC 4206<br>ON 1 <sup>st</sup> SHIFT | ADD 4 CODE BY<br>ON 1 <sup>st</sup> SHIFT | 100%            | 40010A<br>90% | 40711A<br>90% |
| 9     | 1 OC 3006<br>WITH 1/2 TIME | 2 WELDERS<br>ON 1 <sup>st</sup> SHIFT | ADD 2 OC 4206<br>ON 1 <sup>st</sup> SHIFT | ADD 1 CODE BY<br>ON 1 <sup>st</sup> SHIFT | 100%            | 40010A<br>90% | 40711A<br>90% |

LSC-20497



**ANALYSIS OF EXPERIMENTAL FLOW TIME AVERAGES USING  
TAGUCHI METHOD ( $L_1$ )  
TABLE 10-4**

**EXPERIMENTAL FLOW TIME AVERAGES -**

|        |        |
|--------|--------|
| EXP. 1 | 251.22 |
| EXP. 2 | 239.08 |
| EXP. 3 | 238.65 |
| EXP. 4 | 275.43 |
| EXP. 5 | 237.96 |
| EXP. 6 | 232.85 |
| EXP. 7 | 276.63 |
| EXP. 8 | 247.76 |
| EXP. 9 | 251.12 |

| $L_1(3^4)$ |   |   |   |   |
|------------|---|---|---|---|
| NO         | 1 | 2 | 3 | 4 |
| 1          | 1 | 1 | 1 | 1 |
| 2          | 1 | 2 | 2 | 2 |
| 3          | 1 | 3 | 3 | 3 |
| 1          | 2 | 1 | 2 | 3 |
| 2          | 2 | 2 | 3 | 1 |
| 3          | 2 | 3 | 1 | 2 |
| 1          | 3 | 1 | 3 | 2 |
| 2          | 3 | 2 | 1 | 3 |
| 3          | 3 | 3 | 2 | 1 |

| FACTOR | LEVEL |        |
|--------|-------|--------|
| 1      | 1     | 242.96 |
|        | 2     | 284.75 |
|        | 3     | 256.50 |
| 2      | 1     | 267.76 |
|        | 2     | 241.00 |
|        | 3     | 240.87 |
| 3      | 1     | 243.94 |
|        | 2     | 255.21 |
|        | 3     | 251.08 |
| 4      | 1     | 246.77 |
|        | 2     | 249.52 |
|        | 3     | 253.95 |

LSC-20493



**APPENDIX A**  
**TAGUCHI ANALYSIS BY PCN**  
**FOR EXPERIMENTAL RUNS**



# TANUCHI EXPERIMENT ANALYSIS

ALC : QC

RCC : MATPCA

PCN: 412344

L9 ARRAY

05-Sep-89

PCN41234

QUARTERS =

INDUCTIONS =

FACTOR FACTOR FACTOR FACTOR

A B C D

LEVEL LEVEL LEVEL LEVEL

1 1 1 1 1

2 1 2 2 2

3 1 3 3 3

4 2 1 2 3

5 2 2 3 1

6 2 3 1 2

7 3 1 3 2

8 3 2 1 3

9 3 3 2 1

FLOW TIME THRU PUT

RESULT RESULT

110.95 95.83333

125.98 91.22807

112.71 91.22807

119.72 89.47348

121.15 92.98245

110.95 100

125.88 91.22807

121.52 89.47348

130.8 92.98245

FACTOR

RESULT

110.95

125.98

112.71

119.72

121.15

110.95

125.88

121.52

130.8

THRU PUT

95.83333

91.22807

91.22807

89.47348

92.98245

100

91.22807

89.47348

92.98245

EFFECT PERCENT

119.2

117.3

124.1

121.5

122.9

118.2

117.1

125.5

119.9

123.6

EFFECT PERCENT

1.36

2.96

-4.32

-0.55

-1.68

2.23

3.07

-3.85

0.78

-2.36

EFFECT PERCENT

92.8

94.2

91.2

92.2

91.2

94.7

95.1

91.2

91.8

93.9

EFFECT PERCENT

0.05

1.55

-1.60

-0.58

-1.60

2.18

2.58

-1.60

-0.97

1.31

EFFECT PERCENT

92.8

94.2

91.2

92.2

91.2

94.7

95.1

91.2

91.8

93.9

EFFECT PERCENT

0.05

1.55

-1.60

-0.58

-1.60

2.18

2.58

-1.60

-0.97

1.31

EFFECT PERCENT

92.8

94.2

91.2

92.2

91.2

94.7

95.1

91.2

91.8

93.9

EFFECT PERCENT

0.05

1.55

-1.60

-0.58

-1.60

2.18

2.58

-1.60

-0.97

1.31

EFFECT PERCENT

92.8

94.2

91.2

92.2

91.2

94.7

95.1

91.2

91.8

93.9

EFFECT PERCENT

0.05

1.55

-1.60

-0.58

-1.60

2.18

2.58

-1.60

-0.97

1.31

EFFECT PERCENT

92.8

94.2

91.2

92.2

91.2

94.7

95.1

91.2

91.8

93.9

EFFECT PERCENT

0.05

1.55

-1.60

-0.58

-1.60

2.18

2.58

-1.60

-0.97

1.31

EFFECT PERCENT

92.8

94.2

91.2

92.2

91.2

94.7

95.1

91.2

91.8

93.9

EFFECT PERCENT

0.05

1.55

-1.60

-0.58

-1.60

2.18

2.58

-1.60

-0.97

1.31

EFFECT PERCENT

92.8

94.2

91.2

92.2

91.2

94.7

95.1

91.2

91.8

93.9

EFFECT PERCENT

0.05

1.55

-1.60

-0.58

-1.60

2.18

2.58

-1.60

-0.97

1.31

EFFECT PERCENT

92.8

94.2

91.2

92.2

91.2

94.7

95.1

91.2

91.8

93.9

EFFECT PERCENT

0.05

1.55

-1.60

-0.58

-1.60

2.18

2.58

-1.60

-0.97

1.31

EFFECT PERCENT

92.8

94.2

91.2

92.2

91.2

94.7

95.1

91.2

91.8

93.9

TOTAL

1000

834

92.7

92.7

-0.00

AVERAGE

126.9

126.9

-0.00

126.9

126.9

-0.00

MAXIMUM

130.8

100

3.07

95.1

2.58

MINIMUM

110.95

89.47368

117.1

-4.32

-2.86

INDUCTIONS

72

57

57

57

57

57

55

57

57

57

57



# TAMUCCI EXPERIMENT ANALYSIS

ALC : QC

RCC : NATPCA

PCN: 90073A

LY ARRAY

03-Sep-89

PCAT8093

QUARTERS =  
INDUCTIONS =

FACTOR FACTOR FACTOR FACTOR

| ROW NO. | LEVEL | A | B | C | D | LEVEL | FACTOR | RESULT   | THRU PUT | FLOW TIME | EFFECT PERCENT | THRU PUT | EFFECT PERCENT | INDUCTIONS | INPUT | SAMPLES |
|---------|-------|---|---|---|---|-------|--------|----------|----------|-----------|----------------|----------|----------------|------------|-------|---------|
| 1       | 1     | 1 | 1 | 1 | 1 | 1     | 171.43 | 100.5952 | A 1      | 176.5     | 2.70           | 99.1     | 0.31           | 168        | 168   | 169     |
| 2       | 1     | 2 | 2 | 2 | 2 | 2     | 179.79 | 98.30107 | A 2      | 178.3     | 1.71           | 99.0     | 0.23           | 309        | 309   | 304     |
| 3       | 1     | 3 | 3 | 3 | 3 | 3     | 170.3  | 98.30107 | A 3      | 189.4     | -4.41          | 98.3     | -0.54          | 309        | 309   | 304     |
| 4       | 2     | 1 | 2 | 2 | 3 | 1     | 182.93 | 98.30107 | B 1      | 179.2     | 1.23           | 99.1     | 0.31           | 309        | 309   | 304     |
| 5       | 2     | 2 | 3 | 1 | 1 | 2     | 177.5  | 98.30107 | B 2      | 183.3     | -1.04          | 98.3     | -0.54          | 309        | 309   | 304     |
| 6       | 2     | 3 | 1 | 2 | 2 | 3     | 174.45 | 100.3460 | B 3      | 181.7     | -0.19          | 99.0     | 0.23           | 289        | 289   | 290     |
| 7       | 3     | 1 | 3 | 2 | 2 | 1     | 183.17 | 98.30107 | C 1      | 179.5     | 1.06           | 99.7     | 0.87           | 309        | 309   | 304     |
| 8       | 3     | 2 | 1 | 3 | 3 | 2     | 192.56 | 98.05825 | C 2      | 185.1     | -2.02          | 98.4     | -0.43          | 309        | 309   | 303     |
| 9       | 3     | 3 | 2 | 1 | 1 | 3     | 192.46 | 98.30107 | C 3      | 179.7     | 0.96           | 98.4     | -0.43          | 309        | 309   | 304     |
| TOTAL   |       |   |   |   |   |       |        |          |          |           |                |          |                | 0          | 0     | 0       |
| AVERAGE |       |   |   |   |   |       |        |          |          |           |                |          |                | 0          | 0     | 0       |
| MAXIMUM |       |   |   |   |   |       |        |          |          |           |                |          |                | 0          | 0     | 0       |
| MINIMUM |       |   |   |   |   |       |        |          |          |           |                |          |                | 0          | 0     | 0       |

101.4 98.8 181.4 -0.00 98.8 0.00

192.56 100.5952 189.4 2.70 99.7 0.87

171.43 98.05825 176.5 -4.41 98.3 -0.54



## TANDEM EXPERIMENT ANALYSIS

ALC : DC

RCC : MATPCA

L9 ARRAY

05-SEP-89  
PCAP0001

PCN: 9001A

QUARTERS =  
INDUCTIONS =

FACTOR FACTOR FACTOR FACTOR

FLOW TIME THRU PUT

RESULT RESULT FACTOR

EFFECT PERCENT

EFFECT PERCENT

THRU PUT

EFFECT PERCENT

EFFECT PERCENT

EFFECT PERCENT

EFFECT PERCENT

EFFECT PERCENT

EFFECT PERCENT

EFFECT PERCENT

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EFFECT PERCENT

EFFECT PERCENT

RUN NO. LEVEL

LEVEL

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THRU PUT

EFFECT PERCENT

EFFECT PERCENT

THRU PUT

EFFECT PERCENT

EFFECT PERCENT

EFFECT PERCENT

EFFECT PERCENT

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EFFECT PERCENT



# YAMUCHI EXPERIMENT ANALYSIS

ALC : DC

REC : MATPCA

PCN: 97133A

L9 ARRAY

05-Sep-89

PCN97133

## PRINTERS =

## INDUCTIONS =

## FACTOR FACTOR FACTOR FACTOR

A B C D

LEVEL LEVEL LEVEL LEVEL

1 1 1 1

2 1 2 2

3 1 3 3

4 2 1 2

5 2 2 3

6 2 3 1

7 3 1 3

8 3 2 1

9 3 3 2

FLOW TIME

THRU PUT

RESULT RESULT

96.2 102

84.07 98.83720

84.69 98.83720

83.65 98.83720

87.96 98.83720

84.54 98.92473

85.82 98.83720

85.01 98.83720

83.9 98.83720

FLOW TIME

EFFECT PERCENT

86.3 -0.91

85.4 0.18

84.9 0.73

86.6 -1.19

85.7 -0.17

84.4 1.36

86.6 -1.22

83.9 1.95

86.2 -0.72

87.4 -2.12

84.8 0.85

84.5 1.27

THRU PUT

EFFECT PERCENT

99.9 0.70

98.9 -0.33

98.8 -0.36

99.9 0.70

98.8 -0.36

98.9 -0.33

98.8 -0.36

99.9 0.70

98.9 -0.33

98.8 -0.36

INDUCTIONS

50

66

86

86

86

93

86

86

0

0

0

SAMPLES

51

85

85

85

85

92

85

85

0

0

0

TOTAL

770

893

B 3

AVERAGE

85.5

99.2

B 3

MAXIMUM

96.2

102

B 3

MINIMUM

83.65

98.83720

B 3











# FACTORS EXPERIMENT ANALYSIS

ALS : DC      INC : MATPCA

PCB: 49711A

L9 ARRAY

05-Sep-89  
PC449711

QUARTERS =  
INDUCTIONS =

FACTOR FACTOR FACTOR FACTOR

0 0 0 0

LEVEL LEVEL LEVEL LEVEL

1 1 1 1

2 2 2 2

3 3 3 3

4 4 4 4

5 5 5 5

6 6 6 6

7 7 7 7

8 8 8 8

9 9 9 9

RESULT RESULT RESULT RESULT

449.93 94.01709 A 1

332.39 96.07043 A 2

346.01 90.04967 A 3

340.44 90.19607 B 1

313.76 92.01045 B 2

316.9 97.41935 B 3

341.71 91.50326 C 1

403.67 92.01045 C 2

416.6 92.15406 C 3

3722 830 B 3

413.5 93.1

341.71 97.41935

313.76 90.19607

FLOW TIME

EFFECT PERCENT

302.8 7.42

397.1 3.97

440.7 -11.40

530.0 -28.35

350.0 15.36

359.8 12.99

396.8 4.04

436.6 -5.50

407.2 1.54

400.1 3.25

403.7 2.37

436.0 -5.62

413.5 9.00

530.0 15.36

350.0 -20.35

THRU PUT

EFFECT PERCENT

93.6 0.60

93.5 0.41

92.2 -1.01

91.9 -1.20

93.9 0.87

93.5 0.41

94.7 1.70

97.0 -0.30

91.7 -1.47

93.0 -0.11

95.0 2.05

91.3 -1.94

93.1 0.00

95.0 2.05

91.3 -1.94

INDUCTIONS

117

153

153

153

153

153

155

153

153

153

0

0

0

SAMPLES

110

147

139

130

142

151

140

142

141

0

0

0



## TAMMCHIE EXPERIMENT ANALYSIS

ALL: 1 DC

DEC: 10/1/74

PCN: 493154

L9 ARRAY

05-Sep-89

PCA493154

| FACTOR FACTOR FACTOR FACTOR |       |       |       | QUARTERS = |         | INDUCTIONS = |          | FLOW TIME      |                | THRU PUT       |                | INDUCTIONS |            | SAMPLES |         |
|-----------------------------|-------|-------|-------|------------|---------|--------------|----------|----------------|----------------|----------------|----------------|------------|------------|---------|---------|
| ROW NR.                     | LEVEL | LEVEL | LEVEL | LEVEL      | RESULT  | RESULT       | THRU PUT | EFFECT PERCENT | EFFECT PERCENT | EFFECT PERCENT | EFFECT PERCENT | INDUCTIONS | INDUCTIONS | SAMPLES | SAMPLES |
| 1                           | 1     | 1     | 1     | 1          | 1237.48 | 95.95238     | A 1      | 1166.3         | 5.96           | 105.1          | -1.10          | 426        | 426        | 403     | 403     |
| 2                           | 1     | 2     | 2     | 2          | 1125.3  | 109.5238     | A 2      | 1276.6         | -2.94          | 106.6          | 0.26           | 525        | 525        | 575     | 575     |
| 3                           | 1     | 3     | 3     | 3          | 1136.16 | 109.7142     | A 3      | 1277.6         | -3.02          | 107.3          | 0.92           | 525        | 525        | 576     | 576     |
| 4                           | 2     | 1     | 2     | 3          | 1568.13 | 102.8571     | B 1      | 1457.0         | -17.48         | 100.7          | -5.30          | 525        | 525        | 540     | 540     |
| 5                           | 2     | 2     | 3     | 1          | 1124.56 | 109.5238     | B 2      | 1125.3         | 9.27           | 109.5          | 3.01           | 525        | 525        | 575     | 575     |
| 6                           | 2     | 3     | 1     | 2          | 1137.2  | 107.4003     | B 3      | 1138.3         | 8.22           | 108.8          | 2.29           | 527        | 527        | 546     | 546     |
| 7                           | 3     | 1     | 3     | 2          | 1565.33 | 103.2380     | C 1      | 1166.9         | 5.91           | 104.3          | -1.91          | 525        | 525        | 542     | 542     |
| 8                           | 3     | 2     | 1     | 3          | 1125.97 | 109.5238     | C 2      | 1278.3         | -3.08          | 107.2          | 0.80           | 525        | 525        | 575     | 575     |
| 9                           | 3     | 3     | 2     | 1          | 1141.55 | 109.1428     | C 3      | 1275.4         | -2.84          | 107.5          | 1.10           | 525        | 525        | 573     | 573     |
| TOTAL                       |       |       |       |            | 11162   | 957          | B 3      | 1167.9         | 5.83           | 104.9          | -1.36          | 0          | 0          | 0       | 0       |
| AVERAGE                     |       |       |       |            | 1240.2  | 106.3        |          | 1275.9         | -2.88          | 106.7          | 0.38           | 0          | 0          | 0       | 0       |
| MAXIMUM                     |       |       |       |            | 1568.13 | 109.7142     |          | 1276.0         | -2.95          | 107.4          | 0.98           | 0          | 0          | 0       | 0       |
| MINIMUM                     |       |       |       |            | 1124.56 | 95.95238     |          | 1240.2         | 0.00           | 106.3          | -0.00          |            |            |         |         |
|                             |       |       |       |            |         |              |          | 1457.0         | 9.27           | 109.5          | 3.01           |            |            |         |         |
|                             |       |       |       |            |         |              |          | 1125.3         | -17.48         | 100.7          | -5.30          |            |            |         |         |







# FACTORY EXPERIMENT ANALYSIS

ALC : GC      RCC : NATPCA

PCB: 306940

L9 ARRAY

65-Sep-99  
PCA30694

QUARTERS =  
INDUCTIONS =

FACTOR FACTOR FACTOR FACTOR

A B C D

IND. LEVEL LEVEL LEVEL LEVEL

1 1 1 1 1

2 1 2 2 2

3 1 3 3 3

4 2 1 2 3

5 2 2 3 1

6 2 3 1 2

7 3 1 3 2

8 3 2 1 3

9 3 3 2 1

FLOW TIME THRU PUT

RESULT RESULT FACTOR

117.32 97.00737 0.1

109.51 98.70707 0.2

110.44 99.39393 0.3

119.48 99.39393 0.1

114.09 100.00000 0.2

109.45 100 0.3

119.47 100 0.1

112.20 99.39393 0.2

109.75 98.70707 0.3

FLOW TIME

EFFECT PERCENT

112.4 1.03

114.5 -0.83

113.0 -0.21

110.8 -4.54

112.2 1.27

109.9 3.27

113.0 0.51

112.9 0.60

114.9 -1.12

113.9 -0.20

112.0 0.49

114.1 -0.41

THRU PUT

EFFECT PERCENT

98.4 -0.86

100.0 0.73

99.4 0.12

98.8 -0.45

99.6 0.33

99.4 0.12

98.8 -0.45

99.0 -0.28

100.0 0.73

98.8 -0.45

99.6 0.33

99.4 0.12

INDUCTIONS

103

163

163

163

163

163

163

163

163

163

163

163

163

SAMPLES

100

163

163

163

163

163

163

163

163

163

163

163

TOTAL

1022

893

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

0.3

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0.3

0.3

0.3

0.3

0.3

0.3

AVERAGE

113.6

99.3

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

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MAXIMUM

119.48

100.00000

0.73

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MINIMUM

109.45

97.00737

-0.86

-0.86

-0.86

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-0.86







# TAMUCCI EXPERIMENT ANALYSIS

ALC : DC      RCC : RMTPCA      PCN: 304134      L9 ARRAY      05-Sep-89  
PCAS30413

| FACTOR FACTOR FACTOR FACTOR |       |       |       |        |       |       |       |          |          | QUARTERS = |        |        |        | IMMUNITIONS = |        |         |        | FLOW TIME |        |         |  | THRU PUT |  |  |  |
|-----------------------------|-------|-------|-------|--------|-------|-------|-------|----------|----------|------------|--------|--------|--------|---------------|--------|---------|--------|-----------|--------|---------|--|----------|--|--|--|
| ROW NO.                     | LEVEL | LEVEL | LEVEL | LEVEL  | LEVEL | LEVEL | LEVEL | RESULT   | RESULT   | RESULT     | RESULT | FACTOR | EFFECT | PERCENT       | EFFECT | PERCENT | EFFECT | PERCENT   | EFFECT | PERCENT |  |          |  |  |  |
| 1                           | 1     | 1     | 1     | 1      | 1     | 1     | 1     | 106.04   | 99.04761 | A 1        | 94.6   | 3.90   | 99.0   | -0.73         | 99.0   | -0.73   | 99.0   | -0.73     | 99.0   | -0.73   |  |          |  |  |  |
| 2                           | 1     | 2     | 2     | 2      | 2     | 2     | 2     | 75.96    | 99.33774 | A 2        | 115.2  | -17.03 | 100.7  | 0.92          | 100.7  | 0.92    | 100.7  | 0.92      | 100.7  | 0.92    |  |          |  |  |  |
| 3                           | 1     | 3     | 3     | 3      | 3     | 3     | 3     | 101.75   | 98.67549 | A 3        | 85.5   | 15.13  | 99.6   | -0.19         | 99.6   | -0.19   | 99.6   | -0.19     | 99.6   | -0.19   |  |          |  |  |  |
| 4                           | 2     | 1     | 2     | 3      | 3     | 3     | 3     | 116.03   | 98.67549 | B 1        | 107.7  | -9.40  | 99.2   | -0.51         | 99.2   | -0.51   | 99.2   | -0.51     | 99.2   | -0.51   |  |          |  |  |  |
| 5                           | 2     | 2     | 3     | 1      | 1     | 1     | 1     | 119.55   | 101.3245 | B 2        | 91.6   | 6.91   | 100.0  | 0.25          | 100.0  | 0.25    | 100.0  | 0.25      | 100.0  | 0.25    |  |          |  |  |  |
| 6                           | 2     | 3     | 1     | 2      | 2     | 2     | 2     | 109.95   | 102.0134 | B 3        | 95.9   | 2.57   | 100.0  | 0.26          | 100.0  | 0.26    | 100.0  | 0.26      | 100.0  | 0.26    |  |          |  |  |  |
| 7                           | 3     | 1     | 3     | 2      | 3     | 3     | 3     | 101.17   | 100      | C 1        | 98.4   | -0.03  | 100.1  | 0.30          | 100.1  | 0.30    | 100.1  | 0.30      | 100.1  | 0.30    |  |          |  |  |  |
| 8                           | 3     | 2     | 1     | 3      | 3     | 3     | 3     | 79.35    | 99.33774 | C 2        | 89.3   | 9.25   | 99.1   | -0.63         | 99.1   | -0.63   | 99.1   | -0.63     | 99.1   | -0.63   |  |          |  |  |  |
| 9                           | 3     | 3     | 2     | 1      | 1     | 1     | 1     | 75.97    | 99.33774 | C 3        | 107.5  | -9.22  | 100.0  | 0.25          | 100.0  | 0.25    | 100.0  | 0.25      | 100.0  | 0.25    |  |          |  |  |  |
| TOTAL                       |       |       |       | 806    |       |       |       | 890      |          |            |        | 98.0   |        |               |        | -0.63   |        |           |        |         |  |          |  |  |  |
| AVERAGE                     |       |       |       | 98.4   |       |       |       | 99.7     |          |            |        | 98.4   |        |               |        | 0.00    |        |           |        |         |  |          |  |  |  |
| MAXIMUM                     |       |       |       | 119.55 |       |       |       | 102.0134 |          |            |        | 115.2  |        |               |        | 13.13   |        |           |        |         |  |          |  |  |  |
| MINIMUM                     |       |       |       | 75.96  |       |       |       | 98.67549 |          |            |        | 85.5   |        |               |        | -17.03  |        |           |        |         |  |          |  |  |  |



# TAMUCCI EXPERIMENT ANALYSIS

ALC : DC      RCC : BAIPCA

L9 ARRAY

05-Sep-89

PCA38643

PCN: 38643A

QUARTERS =  
INJECTIONS =

## FACTOR FACTOR FACTOR FACTOR

| QTR     | NO. | LEVEL | LEVEL | LEVEL | LEVEL | FLOW TIME | THRU PWT | EFFECT | PERCENT | EFFECT | PERCENT | THRU PWT |
|---------|-----|-------|-------|-------|-------|-----------|----------|--------|---------|--------|---------|----------|
| A       | B   | C     | D     | E     | F     | G         | H        | I      | J       | K      | L       | M        |
| 1       | 1   | 1     | 1     | 1     | 1     | 93.18     | 101.7543 | A 1    | 108.8   | 1.03   | 103.5   | 0.40     |
| 2       | 1   | 2     | 2     | 2     | 2     | 107.96    | 104.3478 | A 2    | 111.8   | -1.73  | 101.5   | -1.33    |
| 3       | 1   | 3     | 3     | 3     | 3     | 125.21    | 104.3478 | A 3    | 109.2   | 0.69   | 103.6   | 0.73     |
| 4       | 2   | 1     | 2     | 3     | 3     | 102.75    | 104.3478 | B 1    | 106.5   | 3.13   | 102.8   | -0.11    |
| 5       | 2   | 2     | 3     | 1     | 1     | 115.18    | 104.3478 | B 2    | 109.1   | 0.76   | 104.3   | 1.44     |
| 6       | 2   | 3     | 1     | 2     | 2     | 117.53    | 95.78947 | B 3    | 114.2   | -3.89  | 101.5   | -1.33    |
| 7       | 3   | 1     | 3     | 2     | 2     | 123.5     | 102.1739 | C 1    | 104.9   | 4.53   | 100.6   | -2.17    |
| 8       | 3   | 2     | 1     | 3     | 3     | 104.12    | 104.3478 | C 2    | 103.5   | 5.82   | 104.3   | 1.44     |
| 9       | 3   | 3     | 2     | 1     | 1     | 99.85     | 104.3478 | C 3    | 121.3   | -10.35 | 103.6   | 0.73     |
| TOTAL   |     |       |       |       |       | 989       | 926      | D 3    | 102.7   | 6.54   | 103.5   | 0.60     |
| AVERAGE |     |       |       |       |       | 109.9     | 102.9    |        | 116.3   | -5.83  | 100.8   | -2.04    |
| MAXIMUM |     |       |       |       |       | 125.21    | 104.3478 |        | 110.7   | -0.70  | 104.3   | 1.44     |
| MINIMUM |     |       |       |       |       | 93.18     | 95.78947 |        | 109.9   | 0.00   | 102.9   | 0.00     |



# STATISTICAL ANALYSIS

33 : 375

REC : MATPCA

**PCW12**

**LG ARRAY**

95-529-89

PCA37719

[illegible]



## TAMUCCI EXPERIMENT ANALYSIS

ALC : GC

RCC : MATPCA

PCN: 35510A

L9 ARRAY

05-Sep-89

PCA35510A

| FACTOR FACTOR FACTOR FACTOR |       |       |       | QUARTERS = |        |          |          | INDUCTIONS = |        |        |                | THRU PUT       |                |                |          | INDUCTIONS     |                |                |          | SAMPLES    |            |            |            |
|-----------------------------|-------|-------|-------|------------|--------|----------|----------|--------------|--------|--------|----------------|----------------|----------------|----------------|----------|----------------|----------------|----------------|----------|------------|------------|------------|------------|
| ROW NO.                     | LEVEL | LEVEL | LEVEL | LEVEL      | RESULT | RESULT   | THRU PUT | RESULT       | RESULT | FACTOR | EFFECT PERCENT | EFFECT PERCENT | EFFECT PERCENT | EFFECT PERCENT | THRU PUT | EFFECT PERCENT | EFFECT PERCENT | EFFECT PERCENT | THRU PUT | INDUCTIONS | INDUCTIONS | INDUCTIONS | INDUCTIONS |
| 1                           | 1     | 1     | 1     | 1          | 140.02 | 100      | A 1      | 143.9        | 2.53   | A 1    | 143.9          | 2.53           | 102.1          | -5.23          | 44       | 102.1          | -5.23          | 102.1          | -5.23    | 44         | 44         | 44         | 44         |
| 2                           | 1     | 2     | 2     | 2          | 152.46 | 104.25   | A 2      | 138.6        | 6.12   | A 2    | 138.6          | 6.12           | 115.9          | 7.57           | 34       | 115.9          | 7.57           | 115.9          | 7.57     | 34         | 34         | 34         | 34         |
| 3                           | 1     | 3     | 3     | 3          | 139.00 | 100      | A 3      | 140.4        | -8.65  | A 3    | 140.4          | -8.65          | 105.2          | -2.33          | 32       | 105.2          | -2.33          | 105.2          | -2.33    | 32         | 32         | 32         | 32         |
| 4                           | 2     | 1     | 2     | 3          | 141.04 | 103.125  | B 1      | 144.9        | 1.00   | B 1    | 144.9          | 1.00           | 103.1          | -4.27          | 33       | 103.1          | -4.27          | 103.1          | -4.27    | 33         | 33         | 33         | 33         |
| 5                           | 2     | 2     | 3     | 1          | 148.4  | 104.25   | B 2      | 153.0        | -3.60  | B 2    | 153.0          | -3.60          | 107.3          | -0.40          | 34       | 107.3          | -0.40          | 107.3          | -0.40    | 34         | 34         | 34         | 34         |
| 6                           | 2     | 3     | 1     | 2          | 126.43 | 138.2352 | B 3      | 145.1        | 1.72   | B 3    | 145.1          | 1.72           | 112.7          | 4.66           | 47       | 112.7          | 4.66           | 112.7          | 4.66     | 47         | 47         | 47         | 47         |
| 7                           | 3     | 1     | 3     | 2          | 153.57 | 104.25   | C 1      | 141.4        | 4.21   | C 1    | 141.4          | 4.21           | 115.9          | 7.57           | 34       | 115.9          | 7.57           | 115.9          | 7.57     | 34         | 34         | 34         | 34         |
| 8                           | 3     | 2     | 1     | 3          | 157.07 | 109.375  | C 2      | 154.5        | -4.65  | C 2    | 154.5          | -4.65          | 103.1          | -4.27          | 35       | 103.1          | -4.27          | 103.1          | -4.27    | 35         | 35         | 35         | 35         |
| 9                           | 3     | 3     | 2     | 1          | 169.05 | 100      | C 3      | 147.0        | 0.43   | C 3    | 147.0          | 0.43           | 104.2          | -3.50          | 32       | 104.2          | -3.50          | 104.2          | -3.50    | 32         | 32         | 32         | 32         |
| TOTAL                       |       |       |       |            | 1329   | 969      | D 3      | 152.0        | -3.45  | D 1    | 152.0          | -3.45          | 102.1          | -5.23          | 0        | 102.1          | -5.23          | 102.1          | -5.23    | 0          | 0          | 0          | 0          |
| AVERAGE                     |       |       |       |            | 147.7  | 107.7    |          | 147.7        | -0.00  |        | 147.7          | -0.00          | 107.7          | 0.00           | 0        | 107.7          | 0.00           | 107.7          | 0.00     | 0          | 0          | 0          | 0          |
| MAXIMUM                     |       |       |       |            | 169.05 | 138.2352 |          | 160.4        | 6.12   |        | 160.4          | 6.12           | 116.9          | 8.53           | 0        | 116.9          | 8.53           | 116.9          | 8.53     | 0          | 0          | 0          | 0          |
| MINIMUM                     |       |       |       |            | 126.43 | 100      |          | 138.6        | -8.65  |        | 138.6          | -8.65          | 102.1          | -5.23          | 0        | 102.1          | -5.23          | 102.1          | -5.23    | 0          | 0          | 0          | 0          |



# SISA NEW INITIATED PROGRAM

三三

**NCC : NAIPCA**

PC#: 351134

19 MAY

05-Sep-89  
PCA35113A

| RUN NO. | FACTOR FACTOR FACTOR FACTOR |       |       |       | QUANTITIES = |          |        |        | INDUCTIONS = |         |            |         | SAMPLES |           |
|---------|-----------------------------|-------|-------|-------|--------------|----------|--------|--------|--------------|---------|------------|---------|---------|-----------|
|         | A                           |       | B     |       | C            |          | D      |        | FLOW TIME    |         | INDUCTIONS |         |         | INTEGRITY |
|         | LEVEL                       | LEVEL | LEVEL | LEVEL | RESULT       | RESULT   | RESULT | RESULT | EFFECT       | PERCENT | EFFECT     | PERCENT |         |           |
| 1       | 1                           | 1     | 1     | 1     | 122.45       | 100      | A 1    | 124.2  | 2.76         | 95.7    | 0.81       | 62      | 42      |           |
| 2       | 1                           | 2     | 2     | 2     | 129.34       | 94.20289 | A 2    | 131.1  | -1.00        | 95.8    | 0.93       | 69      | 65      |           |
| 3       | 1                           | 3     | 3     | 3     | 126.72       | 92.75362 | A 3    | 132.1  | -1.76        | 93.2    | -1.74      | 69      | 64      |           |
| 4       | 2                           | 1     | 2     | 3     | 135.22       | 92.75362 | B 1    | 129.9  | -0.89        | 95.2    | 0.30       | 69      | 64      |           |
| 5       | 2                           | 2     | 3     | 1     | 129.47       | 92.75362 | B 2    | 130.6  | -0.63        | 93.2    | -1.74      | 69      | 64      |           |
| 6       | 2                           | 3     | 1     | 2     | 129.83       | 101.8181 | B 3    | 128.9  | 0.72         | 96.3    | 1.44       | 55      | 56      |           |
| 7       | 3                           | 1     | 3     | 2     | 131.92       | 92.75362 | C 1    | 128.4  | 1.09         | 98.2    | 3.40       | 69      | 64      |           |
| 8       | 3                           | 2     | 1     | 3     | 133.5        | 92.75362 | C 2    | 131.8  | -1.54        | 93.7    | -1.23      | 69      | 64      |           |
| 9       | 3                           | 3     | 2     | 1     | 130.87       | 94.20289 | C 3    | 129.2  | 0.44         | 92.8    | -2.25      | 69      | 65      |           |
|         |                             |       |       |       |              |          | B 1    | 127.5  | 1.76         | 95.7    | 0.81       | 0       | 0       |           |
|         |                             |       |       |       |              |          | B 2    | 130.1  | -0.22        | 96.3    | 1.44       | 0       | 0       |           |
|         |                             |       |       |       |              |          | B 3    | 131.8  | -1.54        | 92.8    | -2.25      | 0       | 0       |           |
|         |                             |       |       |       | 1168         | 854      |        |        |              |         |            |         |         |           |
|         |                             |       |       |       | 129.8        | 94.9     |        | 129.8  | 0.00         | 94.9    | 0.00       |         |         |           |
|         |                             |       |       |       | 135.22       | 101.8181 |        | 132.1  | 2.76         | 98.2    | 3.40       |         |         |           |
|         |                             |       |       |       | 122.45       | 92.75362 |        | 124.2  | -1.76        | 92.8    | -2.25      |         |         |           |



# TANDEM EXPERIMENT ANALYSIS

ALC : DC

BCC : MATPCA

PCN: 35111A

L9 ARRAY

05-Sep-89

PCA35111A

QUARTERS =

INDUCTIONS =

FLOW TIME THRU POT

FACTOR FACTOR FACTOR FACTOR

A B C D

LEVEL LEVEL LEVEL LEVEL

RESULT RESULT RESULT RESULT

FACTOR FACTOR FACTOR FACTOR

EFFECT PERCENT EFFECT PERCENT

THRU POT THRU POT

INDUCTIONS INDUCTIONS

SAMPLES SAMPLES

| ROW NO. | A B C D |       |       |       | FLOW TIME   |          | THRU POT | FLOW TIME      |                | THRU POT |       | INDUCTIONS | SAMPLES |
|---------|---------|-------|-------|-------|-------------|----------|----------|----------------|----------------|----------|-------|------------|---------|
|         | LEVEL   | LEVEL | LEVEL | LEVEL | RESULT      | RESULT   |          | EFFECT PERCENT | EFFECT PERCENT |          |       |            |         |
| 1       | 1       | 1     | 1     | 1     | 73.12       | 94.11764 | A 1      | 72.0           | -0.24          | 97.0     | -1.36 | 51         | 49      |
| 2       | 1       | 2     | 2     | 2     | 72.06       | 98.30709 | A 2      | 72.7           | -0.17          | 99.6     | 1.27  | 62         | 61      |
| 3       | 1       | 3     | 3     | 3     | 73.11       | 98.30709 | A 3      | 72.3           | 0.41           | 98.4     | 0.09  | 62         | 61      |
| 4       | 2       | 1     | 2     | 3     | 72.03       | 98.30709 | B 1      | 72.7           | -0.09          | 97.0     | -1.36 | 62         | 61      |
| 5       | 2       | 2     | 3     | 1     | 72.09       | 98.30709 | B 2      | 72.1           | 0.71           | 98.4     | 0.09  | 62         | 61      |
| 6       | 2       | 3     | 1     | 2     | 74.101.0067 | B 3      | 73.0     | -0.61          | 99.6           | 1.27     | 55    | 54         |         |
| 7       | 3       | 1     | 3     | 2     | 72.01       | 98.30709 | C 1      | 73.1           | -0.46          | 98.1     | -0.17 | 62         | 61      |
| 8       | 3       | 2     | 1     | 3     | 72.07       | 98.30709 | C 2      | 72.0           | 0.77           | 98.4     | 0.09  | 62         | 61      |
| 9       | 3       | 3     | 2     | 1     | 71.98       | 98.30709 | C 3      | 72.7           | -0.12          | 98.4     | 0.09  | 62         | 61      |
|         |         |       |       |       |             |          |          |                |                |          |       |            |         |
|         |         |       |       |       | 653         | 885      | B 3      | 72.4           | 0.25           | 98.4     | 0.09  | 0          | 0       |
|         |         |       |       |       | 72.6        | 98.3     |          | 72.6           | 0.00           | 98.3     | -0.00 | 0          | 0       |
|         |         |       |       |       | 74.101.0067 |          |          | 73.1           | 0.77           | 99.6     | 1.27  | 0          | 0       |
|         |         |       |       |       | 71.98       | 94.11764 |          | 72.0           | -0.66          | 97.0     | -1.36 | 0          | 0       |

TOTAL

AVERAGE

MAXIMUM

MINIMUM



# TANDEM EXPERIMENT ANALYSIS

ALC : DC

REC : MATPCA

PCN: 350234

L9 ARRAY

05-Sep-89

PCAS50234

QUARTERS =

FACTOR FACTOR FACTOR FACTOR

A B C D

LEVEL LEVEL LEVEL LEVEL

1 1 1 1

2 1 2 2

3 1 3 3

4 2 1 2

5 2 2 3

6 2 3 1

7 3 1 3

8 3 2 1

9 3 3 2

FLOW TIME

RESULT

RESULT

RESULT

RESULT

RESULT

RESULT

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RESULT

RESULT

RESULT

EFFECT

PERCENT

PERCENT

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SAMPLES

TOTAL

AVERAGE

MAXIMUM

MINIMUM

1043 910 910

204.0 101.1

231.15 102.0979

104.56 97.56097

204.0 -0.00

220.0 4.45

195.3 -7.85

101.1 -0.00

101.9 0.07

100.0 -1.04

101.1 -0.00

101.9 0.07

100.0 -1.04

101.1 -0.00

101.9 0.07

100.0 -1.04



# FACTORY EXPERIMENT ANALYSIS

ALC : DC

BCC : MATPCA

PCN: 34551A

L9 ARRAY

05-Sep-89

PCN34551

## FACTORY FACTOR FACTOR FACTOR

A B C D

LEVEL LEVEL LEVEL LEVEL

1 1 1 1

2 1 2 2

3 1 3 3

4 2 1 2

5 2 2 3

6 2 3 1

7 3 1 3

8 3 2 1

9 3 3 2

QUARTERS =

INDUCTIONS =

INDUCTIONS =

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SAMPLES

TOTAL

AVERAGE

MAXIMUM

MINIMUM

316.1

316.1

316.2

315.57

104.9

104.9

105.5

102.1276

0.00

0.00

0.00

-1.00



DATE : 30 DEC 1974

65-591-19

PCN: 34253A

PCAS4253

• 58113601  
• 58113600

| DOWN NO. | FACTOR FACTOR FACTOR FACTOR |   |   |         |           |          | INSTRUCTIONS |        | THRU PUT | EFFECT PERCENT | IMBUCTIONS | THRU PUT | EFFECT PERCENT | IMBUCTIONS | SAMPLES |
|----------|-----------------------------|---|---|---------|-----------|----------|--------------|--------|----------|----------------|------------|----------|----------------|------------|---------|
|          | A                           | B | C | D       | FLOW TIME | THRU PUT | RESULT       | RESULT |          |                |            |          |                |            |         |
| 1        | 1                           | 1 | 1 | 1       | 100.67    | 99.0049  | A 1          | 147.4  | 0.43     | 99.9           | 0.42       | 452      |                |            | 456     |
| 2        | 1                           | 2 | 2 | 2       | 151.32    | 99.34426 | A 2          | 148.5  | -0.29    | 99.2           | -0.20      | 305      |                |            | 303     |
| 3        | 1                           | 3 | 3 | 3       | 142.34    | 99.34426 | A 3          | 148.3  | -0.14    | 99.2           | -0.21      | 305      |                |            | 303     |
| 4        | 2                           | 1 | 2 | 3       | 153.46    | 98.68852 | B 1          | 148.9  | -0.58    | 99.5           | 0.09       | 305      |                |            | 301     |
| 5        | 2                           | 2 | 3 | 1       | 150.5     | 99.67213 | B 2          | 150.6  | -1.72    | 99.5           | 0.01       | 305      |                |            | 304     |
| 6        | 2                           | 3 | 1 | 2       | 141.59    | 99.34595 | B 3          | 144.7  | 2.30     | 99.4           | -0.09      | 314      |                |            | 312     |
| 7        | 3                           | 1 | 3 | 2       | 140.09    | 99.01639 | C 1          | 146.0  | 0.09     | 99.9           | 0.42       | 305      |                |            | 302     |
| 8        | 3                           | 2 | 1 | 3       | 150.95    | 99.34426 | C 2          | 151.0  | -2.40    | 99.1           | -0.32      | 305      |                |            | 303     |
| 9        | 3                           | 3 | 2 | 1       | 150.12    | 99.34426 | C 3          | 145.0  | 1.51     | 99.3           | -0.10      | 305      |                |            | 303     |
|          |                             |   |   |         |           |          | D 1          | 149.0  | -1.14    | 100.0          | 0.53       | 0        |                |            | 0       |
|          |                             |   |   |         |           |          | D 2          | 145.9  | 1.50     | 99.2           | -0.20      | 0        |                |            | 0       |
|          |                             |   |   |         |           |          | D 3          | 146.6  | -0.36    | 99.1           | -0.32      | 0        |                |            | 0       |
|          |                             |   |   | TOTAL   | 1333      | 995      |              |        |          |                |            |          |                |            |         |
|          |                             |   |   | AVERAGE | 148.1     | 99.4     |              | 148.1  | -0.00    | 99.4           | 0.00       |          |                |            |         |
|          |                             |   |   | MAXIMUM | 153.46    | 100.0049 |              | 151.6  | 2.30     | 100.0          | 0.53       |          |                |            |         |
|          |                             |   |   | MINIMUM | 141.59    | 98.68852 |              | 144.7  | -2.40    | 99.1           | -0.32      |          |                |            |         |



# FACTORY EXPERIMENT ANALYSIS

ALC : QC

RCC : MATPCA

PCN: 342520

LY ARRAY

05-Sep-89  
PCA34252

QUANTILES =  
INDUCTIONS =

FACTOR FACTOR FACTOR FACTOR

A B C D

LEVEL LEVEL LEVEL LEVEL

1 1 1 1

2 1 2 2

3 1 3 3

4 2 1 2

5 2 2 3

6 2 3 1

7 3 1 3

8 3 2 1

9 3 3 2

FLOW TIME

RESULT RESULT

77.7 79.51 74.54 80.73

95.77464 101.9230 101.9230 100

101.9230 101.9230 101.9230 101.9230

100 100 100 100

101.9230 101.9230 101.9230 101.9230

101.9230 101.9230 101.9230 101.9230

100 100 100 100

101.9230 101.9230 101.9230 101.9230

101.9230 101.9230 101.9230 101.9230

EFFECT PERCENT

77.3 80.6 80.0 70.1

2.55 -1.60 -0.87 1.50

-2.30 0.80 -1.85 -1.17

3.02 -0.22 0.70 -0.46

79.3 81.2 76.9

79.3 81.2 76.9

79.3 81.2 76.9

79.3 81.2 76.9

79.3 81.2 76.9

79.3 81.2 76.9

INDUCTIONS

71 52 52 52

52 52 52 52

52 52 52 52

52 52 52 52

52 52 52 52

52 52 52 52

52 52 52 52

52 52 52 52

52 52 52 52

52 52 52 52

EFFECT PERCENT

99.9 101.3 100.6 98.6

-0.73 0.69 0.04 -2.00

101.3 101.3 101.3 101.3

99.2 -1.35 0.67 0.67

99.9 -0.73 0.69 0.69

101.3 101.3 100.6 100.6

100.6 100.6 100.6 100.6

100.6 100.6 100.6 100.6

100.6 100.6 100.6 100.6

100.6 100.6 100.6 100.6

INDUCTIONS

71 52 52 52

52 52 52 52

52 52 52 52

52 52 52 52

52 52 52 52

52 52 52 52

52 52 52 52

52 52 52 52

52 52 52 52

52 52 52 52

TOTAL

713 905

AVERAGE

79.3 100.6

MAXIMUM

83.69 101.9607

MINIMUM

74.54 95.77464

-0.00

1.32

-2.00



# THUNDER EXPERIMENT ANALYSIS

ALC : DC REC : MATPEA

L9 ARRAY

05-Sep-89  
PCA34120

PCNs: 34120A

| QUARTERS =                  |       |       |       |       |           |          |        |        |        | INNOVATIONS = |         |        |         |        |             |            |            |            |            |            |  |  |  |  |
|-----------------------------|-------|-------|-------|-------|-----------|----------|--------|--------|--------|---------------|---------|--------|---------|--------|-------------|------------|------------|------------|------------|------------|--|--|--|--|
| FACTOR FACTOR FACTOR FACTOR |       |       |       |       | FLOW TIME |          |        |        |        | THRU PUT      |         |        |         |        | INNOVATIONS |            |            |            |            | SAMPLES    |  |  |  |  |
| ROW NO.                     | LEVEL | LEVEL | LEVEL | LEVEL | RESULT    | RESULT   | RESULT | RESULT | RESULT | EFFECT        | PERCENT | EFFECT | PERCENT | EFFECT | PERCENT     | INDUCTIONS | INDUCTIONS | INDUCTIONS | INDUCTIONS | INDUCTIONS |  |  |  |  |
| 1                           | 1     | 1     | 1     | 1     | 1202.93   | 107.0270 | A 1    | 1203.1 | -0.00  | 101.7         | 1.97    | 370    | 376     |        |             |            |            |            |            |            |  |  |  |  |
| 2                           | 1     | 2     | 2     | 2     | 1203.93   | 99.04153 | A 2    | 1203.0 | 0.01   | 98.5          | -1.26   | 313    | 310     |        |             |            |            |            |            |            |  |  |  |  |
| 3                           | 1     | 3     | 3     | 3     | 1202.53   | 99.04153 | A 3    | 1203.1 | -0.00  | 99.0          | -0.70   | 313    | 310     |        |             |            |            |            |            |            |  |  |  |  |
| 4                           | 2     | 1     | 2     | 3     | 1201.83   | 99.04153 | B 1    | 1202.5 | 0.04   | 101.7         | 1.97    | 313    | 310     |        |             |            |            |            |            |            |  |  |  |  |
| 5                           | 2     | 2     | 3     | 1     | 1204.02   | 99.04153 | B 2    | 1203.4 | -0.03  | 99.0          | -0.70   | 313    | 310     |        |             |            |            |            |            |            |  |  |  |  |
| 6                           | 2     | 3     | 1     | 2     | 1203.07   | 97.34042 | B 3    | 1203.3 | -0.02  | 98.5          | -1.26   | 304    | 296     |        |             |            |            |            |            |            |  |  |  |  |
| 7                           | 3     | 1     | 3     | 2     | 1202.05   | 99.04153 | C 1    | 1202.0 | 0.03   | 101.1         | 1.41    | 313    | 310     |        |             |            |            |            |            |            |  |  |  |  |
| 8                           | 3     | 2     | 1     | 3     | 1202.29   | 99.04153 | C 2    | 1203.3 | -0.02  | 99.0          | -0.70   | 313    | 310     |        |             |            |            |            |            |            |  |  |  |  |
| 9                           | 3     | 3     | 2     | 1     | 1204.25   | 99.04153 | C 3    | .1     | -0.00  | 99.0          | -0.70   | 315    | 310     |        |             |            |            |            |            |            |  |  |  |  |
| TOTAL                       |       |       |       |       | 10020     | 898      | B 3    | 1202.2 | 0.07   | 99.0          | -0.70   | 0      | 0       |        |             |            |            |            |            |            |  |  |  |  |
| AVERAGE                     |       |       |       |       | 1203.1    | 99.7     |        | 1203.1 | 0.00   | 99.7          | 0.00    |        |         |        |             |            |            |            |            |            |  |  |  |  |
| MAXIMUM                     |       |       |       |       | 1204.25   | 107.0270 |        | 1203.7 | 0.07   | 101.7         | 1.97    |        |         |        |             |            |            |            |            |            |  |  |  |  |
| MINIMUM                     |       |       |       |       | 1201.83   | 97.34042 |        | 1202.2 | -0.05  | 98.5          | -1.26   |        |         |        |             |            |            |            |            |            |  |  |  |  |







# FACTORY EXPERIMENT ANALYSIS

ALL : DC DEC : MATPCA

PCN: 30241A

L9 AIRRAY

05-Sep-89

PCA30241

## QUARTERS = INDUCTIONS =

| FACTOR FACTOR FACTOR FACTOR |   |   |   | FLOW TIME THRU POT |       |       |       | FLOW TIME |          |        |        | THRU POT |        |        |         |
|-----------------------------|---|---|---|--------------------|-------|-------|-------|-----------|----------|--------|--------|----------|--------|--------|---------|
| A                           | B | C | D | LEVEL              | LEVEL | LEVEL | LEVEL | RESULT    | RESULT   | EFFECT | EFFECT | EFFECT   | EFFECT | EFFECT | PERCENT |
| 1                           | 1 | 1 | 1 | 1                  | 1     | 1     | 1     | 244.04    | 102.7777 | A 1    | 228.9  | 7.28     | 101.9  | 0.82   |         |
| 2                           | 1 | 2 | 2 | 2                  | 2     | 2     | 2     | 217.48    | 101.4438 | A 2    | 243.3  | 1.43     | 101.2  | 0.09   |         |
| 3                           | 1 | 3 | 3 | 3                  | 3     | 3     | 3     | 225       | 101.3698 | A 3    | 248.4  | -0.71    | 100.2  | -0.91  |         |
| 4                           | 2 | 1 | 2 | 3                  | 3     | 3     | 3     | 298       | 100.2739 | B 1    | 200.8  | -13.76   | 101.0  | -0.09  |         |
| 5                           | 2 | 2 | 3 | 1                  | 1     | 1     | 1     | 210.72    | 101.9178 | B 2    | 222.3  | 9.97     | 101.5  | 0.35   |         |
| 6                           | 2 | 3 | 1 | 2                  | 2     | 2     | 2     | 221.26    | 101.4005 | B 3    | 237.5  | 3.79     | 100.8  | -0.27  |         |
| 7                           | 3 | 1 | 3 | 2                  | 2     | 2     | 2     | 300.48    | 100      | C 1    | 234.4  | 4.98     | 101.7  | 0.56   |         |
| 8                           | 3 | 2 | 1 | 3                  | 3     | 3     | 3     | 238.39    | 100.8219 | C 2    | 240.6  | -5.58    | 100.5  | -0.55  |         |
| 9                           | 3 | 3 | 2 | 1                  | 1     | 1     | 1     | 244.24    | 99.72682 | C 3    | 245.4  | 0.59     | 101.1  | -0.01  |         |
| TOTAL                       |   |   |   |                    |       |       |       | 2222      | 910      | B 3    | 240.3  | 2.65     | 101.5  | 0.37   |         |
| AVERAGE                     |   |   |   |                    |       |       |       | 244.9     | 101.1    | B 2    | 246.5  | 0.16     | 101.0  | -0.09  |         |
| MAXIMUM                     |   |   |   |                    |       |       |       | 300.48    | 102.7777 | B 3    | 253.8  | -2.81    | 100.8  | -0.28  |         |
| MINIMUM                     |   |   |   |                    |       |       |       | 210.72    | 99.72682 |        | 222.3  | -13.76   | 100.2  | -0.91  |         |



# TANDEM EXPERIMENT ANALYSIS

ALS : DC      RCC : MATPCA

PCN: 30056A

L9 ARRAY

05-Sep-89  
PC030056

| QUARTERS =                  |       |       |       |           |          |         |         |         |         |
|-----------------------------|-------|-------|-------|-----------|----------|---------|---------|---------|---------|
| IMMUNCTIONS =               |       |       |       |           |          |         |         |         |         |
| FACTOR FACTOR FACTOR FACTOR |       |       |       |           |          |         |         |         |         |
| A                           | B     | C     | D     | FLOW TIME | THRU PUT | EFFECT  | PERCENT | EFFECT  | PERCENT |
| NO. LEVEL                   | LEVEL | LEVEL | LEVEL | RESULT    | THRU PUT | PERCENT | PERCENT | PERCENT | PERCENT |
| 1                           | 1     | 1     | 1     | 73.77     | 101.6949 | A 1     | 75.0    | -0.46   | 100.6   |
| 2                           | 1     | 2     | 2     | 75.09     | 100      | A 2     | 73.5    | 1.65    | 99.2    |
| 3                           | 1     | 3     | 3     | 75.67     | 100      | A 3     | 75.7    | -1.25   | 100.0   |
| 4                           | 2     | 1     | 2     | 75.66     | 100      | B 1     | 75.0    | -0.39   | 100.6   |
| 5                           | 2     | 2     | 3     | 75.83     | 100      | B 2     | 75.7    | -1.30   | 100.0   |
| 6                           | 2     | 3     | 1     | 69.04     | 97.56097 | B 3     | 73.5    | 1.69    | 99.2    |
| 7                           | 3     | 1     | 3     | 75.69     | 100      | C 1     | 72.8    | 2.59    | 99.8    |
| 8                           | 3     | 2     | 1     | 75.63     | 100      | C 2     | 75.7    | -1.27   | 100.0   |
| 9                           | 3     | 3     | 2     | 75.73     | 100      | C 3     | 75.7    | -1.32   | 100.0   |
|                             |       |       |       |           |          | B 1     | 75.1    | -0.49   | 100.6   |
|                             |       |       |       |           |          | B 2     | 73.5    | 1.70    | 99.2    |
|                             |       |       |       |           |          | B 3     | 75.7    | -1.21   | 100.0   |
| TOTAL                       |       |       |       | 673       | 899      | B 3     | 75.7    | -1.21   | 100.0   |
| AVERAGE                     |       |       |       | 74.7      | 99.9     |         | 74.7    | -0.00   | 99.9    |
| MAXIMUM                     |       |       |       | 75.83     | 101.6949 |         | 75.7    | 2.59    | 100.6   |
| MINIMUM                     |       |       |       | 69.04     | 97.56097 |         | 72.8    | -1.32   | 99.2    |



OPERATION FILE

| NAME P HWIT      |       | ALC OKS               |                             | DATE 8-10-89   |                       | RCC MTPCA |                  | SHEET 1 OF 2 |                |               |   |   |     |
|------------------|-------|-----------------------|-----------------------------|----------------|-----------------------|-----------|------------------|--------------|----------------|---------------|---|---|-----|
| 30241A           |       | WCD CAEAB05           |                             | WCD DATE 89033 |                       |           |                  |              |                |               |   |   |     |
| OPERATION NUMBER | RCC   | OPERATION DESCRIPTION | MANDATORY CAPABILITY FACTOR | OPERATION TYPE | MANDATORY FLIGHT TIME | MANPOWER  |                  | EQUIPMENT    |                | TIME REQUIRED | DATA SOURCE COMMENTS  |   |     |
|                  |       |                       |                             |                |                       | QTY       | SKILL CODE/LEVEL | QTY          | EQUIPMENT CODE |               |   | % | HLA |
| 50               | MTPCA | IN DATE               | 1.0                         | TRANSIT        |                       |           |                  |              |                |               | NO BARRING IN DURING IN GROUPS OF 2 TO 15. LEFT ON TABLE, NO PROBLEM.   |   |     |
|                  |       |                       |                             | SETUP          |                       |           |                  |              |                |               |   |   |     |
|                  |       |                       |                             | PROCESS        |                       |           |                  |              |                |               |   |   |     |
| 55               |       | WELD                  | 1.0                         | TRANSIT        |                       |           |                  |              |                |               | ALJ, OC NO'S 5700, 5710, 5719, 5721, 5722, 4906, 4647, 5802, 5801, 4908 |   |     |
|                  |       |                       |                             | SETUP          |                       |           |                  |              |                |               |   |   |     |
|                  |       |                       |                             | PROCESS        |                       | WG 10     | 1                | 100          | .50            | OC4907        |   | 1 | 100 |
| 56               |       | WELD                  | 1.0                         | TRANSIT        |                       |           |                  |              |                |               | NOTE ALJ, OC NO'S IN OP 50. REPLACE QWAS ON CAPABILITIES (COILS)        |   |     |
|                  |       |                       |                             | SETUP          |                       |           |                  |              |                |               |   |   |     |
|                  |       |                       |                             | PROCESS        |                       |           | 1                | 100          | .25            | OC4907        |   | 1 | 100 |
| 360              |       | CHK                   | 1.0                         | TRANSIT        |                       |           |                  |              |                |               | TANK IS WARE. INCLUDING CHANGE WITH A PROBABLY NO OC NO. ON TANK.       |   |     |
|                  |       |                       |                             | SETUP          |                       |           |                  |              |                |               |   |   |     |
|                  |       |                       |                             | PROCESS        |                       |           | 1                | 100          | .17            | TANK          |   | 1 | 100 |
|                  |       | WELD                  | 1.0                         | TRANSIT        |                       |           |                  |              |                |               | LEAK TEST   |   |     |
|                  |       |                       |                             | SETUP          |                       |           |                  |              |                |               |   |   |     |
|                  |       |                       |                             | PROCESS        |                       |           |                  |              |                |               |   |   |     |

LSC:MMWXC



OPERATION FILE

| NAME <u>P Hunt</u> |       | ALC <u>OKS</u>        |                             | DATE <u>8-10-89</u>   |                       | RCC <u>MATRA</u>      |      | SHEET <u>2</u> OF <u>2</u> |                    |                      |
|--------------------|-------|-----------------------|-----------------------------|-----------------------|-----------------------|-----------------------|------|----------------------------|--------------------|----------------------|
| WCD <u>CAEB05</u>  |       | WCD DATE <u>89033</u> |                             | WCD DATE <u>89033</u> |                       | WCD DATE <u>89033</u> |      | WCD DATE <u>89033</u>      |                    |                      |
| OPERATION NUMBER   | RCS   | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW SERIES | Skill CODE LEVEL      | QTY. | TIME REQUIRED %            | TIME REQUIRED MIN. | DATA SOURCE COMMENTS |
| 361                | MATRA | CHK                   | 1.0                         | TRANSIT               |                       |                       |      |                            |                    | TANK 13              |
|                    |       |                       |                             | SETUP                 |                       |                       |      |                            |                    | WATER                |
|                    |       |                       |                             | PROCESS               |                       |                       |      |                            |                    | Procedure =          |
|                    |       |                       |                             |                       |                       |                       |      |                            |                    | check with           |
|                    |       |                       |                             |                       |                       |                       |      |                            |                    | ATBBERN. NO          |
|                    |       |                       |                             |                       |                       |                       |      |                            |                    | BE AB ON TANK.       |
|                    |       |                       |                             |                       |                       |                       |      |                            |                    | LEAK TEST            |
| 9999               | ↓     | OUT DARE              | 1.0                         | TRANSIT               |                       | WG10                  | 1    |                            | 17                 |                      |
|                    |       |                       |                             | SETUP                 |                       |                       |      |                            |                    |                      |
|                    |       |                       |                             | PROCESS               |                       |                       |      |                            |                    |                      |
|                    |       |                       |                             | TRANSIT               |                       |                       |      |                            |                    |                      |
|                    |       |                       |                             | SETUP                 |                       |                       |      |                            |                    |                      |
|                    |       |                       |                             | PROCESS               |                       |                       |      |                            |                    |                      |
|                    |       |                       |                             | TRANSIT               |                       |                       |      |                            |                    |                      |
|                    |       |                       |                             | SETUP                 |                       |                       |      |                            |                    |                      |
|                    |       |                       |                             | PROCESS               |                       |                       |      |                            |                    |                      |
|                    |       |                       |                             | TRANSIT               |                       |                       |      |                            |                    |                      |
|                    |       |                       |                             | SETUP                 |                       |                       |      |                            |                    |                      |
|                    |       |                       |                             | PROCESS               |                       |                       |      |                            |                    |                      |
|                    |       |                       |                             | TRANSIT               |                       |                       |      |                            |                    |                      |
|                    |       |                       |                             | SETUP                 |                       |                       |      |                            |                    |                      |
|                    |       |                       |                             | PROCESS               |                       |                       |      |                            |                    |                      |

ISC-20072C



## OPERATION OFILE

| NAME <u>P. HUNT</u> |       | ALC <u>OKC</u>        |                             | DATE <u>8-10-89</u> |                      | RCC <u>MAFRA</u>      |                 | SHEET <u>1</u> OF <u>1</u> |      |                      |                 |   |
|---------------------|-------|-----------------------|-----------------------------|---------------------|----------------------|-----------------------|-----------------|----------------------------|------|----------------------|-----------------|---|
| WCD <u>CAEYIO</u>   |       | WCD DATE <u>89175</u> |                             | WCD <u>CAEYIO</u>   |                      | WCD DATE <u>89175</u> |                 |                            |      |                      |                 |   |
| OPERATION NUMBER    | RCC   | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE      | MANDATORY FLOW HOURS | IMPORTER              |                 | EQUIPMENT                  |      | DATA SOURCE COMMENTS |                 |   |
|                     |       |                       |                             |                     |                      | QTY.                  | TIME REQUIRED % | TIME REQUIRED %            | QTY. |                      | TIME REQUIRED % |   |
| 110                 | MAFRA | IN DATE               | 1.0                         | TRANSIT             | 1.0                  | WG10                  | 1               | 100                        | .50  | 100                  | .50             | ALT. NO'S ARE 4907, 5718, 5719, 5721, 5722, 4906, 4647, 5702, 5801, 4908, SEE ALT OC NO'S IN 0600. WELD COVERS. |
|                     |       |                       |                             | SETUP               |                      |                       |                 |                            |      |                      |                 |   |
|                     |       |                       |                             | PROCESS             |                      |                       |                 |                            |      |                      |                 |   |
| 340                 |       | WELD                  | 1.0                         | TRANSIT             | 1.0                  | WG10                  | 1               | 100                        | .50  | 100                  | .50             | SEE ALT OC NO'S IN 0600. WELD COVERS.   |
|                     |       |                       |                             | SETUP               |                      |                       |                 |                            |      |                      |                 |   |
|                     |       |                       |                             | PROCESS             |                      |                       |                 |                            |      |                      |                 |   |
| 350                 |       | CHK                   | 1.0                         | TRANSIT             | 1.0                  | WG10                  | 1               | 100                        | .50  | 100                  | .50             | REQUIR CHK IN WARE TANK WITH NO OC NO'S USED !! IN TANKS. TIME INCREASES RE WORK.                               |
|                     |       |                       |                             | SETUP               |                      |                       |                 |                            |      |                      |                 |   |
|                     |       |                       |                             | PROCESS             |                      |                       |                 |                            |      |                      |                 |   |
| 999                 |       | OUT DATE              | 1.0                         | TRANSIT             | 1.0                  | WG10                  | 1               | 100                        | .50  | 100                  | .50             |   |
|                     |       |                       |                             | SETUP               |                      |                       |                 |                            |      |                      |                 |   |
|                     |       |                       |                             | PROCESS             |                      |                       |                 |                            |      |                      |                 |   |

LSC-21072C







# OPERATION FILE

| NAME <u>L. Hunt</u> |     | ALC <u>OKC</u>        |                             | DATE <u>8-10-89</u>   |                       | RDC <u>MATPCA</u> |                 | SHEET <u>1 of 1</u> |                 |
|---------------------|-----|-----------------------|-----------------------------|-----------------------|-----------------------|-------------------|-----------------|---------------------|-----------------|
| 38718A              |     | WCD <u>CAEM10</u>     |                             | WCD DATE <u>88239</u> |                       |                   |                 |                     |                 |
| OPERATION NUMBER    | SCS | OPERATION DESCRIPTION | MANDATORY OCCURRENCE FACTOR | OPERATION TYPE        | MANDATORY FLOW RATE % | TIME REQUIRED %   | TIME REQUIRED % | TIME REQUIRED %     | TIME REQUIRED % |
|                     |     |                       |                             |                       |                       |                   |                 |                     |                 |
|                     |     |                       |                             | TRANSIT               |                       |                   |                 |                     |                 |
|                     |     |                       |                             | SETUP                 |                       |                   |                 |                     |                 |
|                     |     |                       |                             | PROCESS               |                       |                   |                 |                     |                 |
| 175                 |     | WELD                  | 1.0                         | TRANSIT               |                       |                   |                 |                     |                 |
|                     |     |                       |                             | SETUP                 |                       |                   |                 |                     |                 |
|                     |     |                       |                             | PROCESS               |                       |                   |                 |                     |                 |
| 255                 |     | WELD                  | 1.0                         | TRANSIT               |                       |                   |                 |                     |                 |
|                     |     |                       |                             | SETUP                 |                       |                   |                 |                     |                 |
|                     |     |                       |                             | PROCESS               |                       |                   |                 |                     |                 |
| 256                 |     | CHK                   | 1.0                         | TRANSIT               |                       |                   |                 |                     |                 |
|                     |     |                       |                             | SETUP                 |                       |                   |                 |                     |                 |
|                     |     |                       |                             | PROCESS               |                       |                   |                 |                     |                 |
| 999                 |     | OUT DATE              | 1.0                         | TRANSIT               |                       |                   |                 |                     |                 |
|                     |     |                       |                             | SETUP                 |                       |                   |                 |                     |                 |
|                     |     |                       |                             | PROCESS               |                       |                   |                 |                     |                 |







UPPERHILL PROFILE

NAME: P. Hunt ALO: OKC DATE: 8-10-89 NCC: MATPCA SHEET: 1 OF 1  
 WCD: CAEC07 WCD DATE: 89045

| OPERATION NUMBER | NCC    | OPERATION DESCRIPTION | IMMEDIATE OCCURRENCES FACTOR | OPERATION TYPE | IMMEDIATE FLOW HOURS |      | MANPOWER |                  | EQUIPMENT |       | TIME REQUIRED |                | DATA SOURCE COMMENTS   |
|------------------|--------|-----------------------|------------------------------|----------------|----------------------|------|----------|------------------|-----------|-------|---------------|----------------|--|
|                  |        |                       |                              |                | %                    | HRS. | QTY.     | SKILL CODE/LEVEL | %         | THRS. | QTY.          | EQUIPMENT CODE |  |
|                  |        | IN DATE               |                              | TRANSMIT       |                      |      |          |                  |           |       |               |                |  |
|                  |        | SETUP                 |                              | SETUP          |                      |      |          |                  |           |       |               |                |  |
|                  |        | PROCESS               |                              | PROCESS        |                      |      |          |                  |           |       |               |                |  |
| 55               | MATPCA | WELD                  | 1.0                          | TRANSMIT       |                      |      |          |                  |           |       |               |                | ALT. OC NO. 5<br>AAR: 4907<br>5720, 5718, 5719,<br>5724, 5722, 4647,<br>5802, 5801, 4908<br>WELD EXTENSION<br>570, 55 WITH WELDING<br>SET UP. 55 FOR |
|                  |        | SETUP                 |                              | SETUP          |                      |      |          |                  |           |       |               |                | ALT. OC NO. 5  |
|                  |        | PROCESS               |                              | PROCESS        |                      |      |          |                  |           |       |               |                | WELD FILTER AND COMPRESSIONS   |
| 70               | MATPCA | WELD                  | 1.0                          | TRANSMIT       |                      |      |          |                  |           |       |               |                | SET UP. 55 FOR   |
|                  |        | SETUP                 |                              | SETUP          |                      |      |          |                  |           |       |               |                | ALT. OC NO. 5  |
|                  |        | PROCESS               |                              | PROCESS        |                      |      |          |                  |           |       |               |                | WELD LIO TO EXCITER  |
| 270              | MATPCA | WELD                  | 1.0                          | TRANSMIT       |                      |      |          |                  |           |       |               |                | SET UP. 55 FOR   |
|                  |        | SETUP                 |                              | SETUP          |                      |      |          |                  |           |       |               |                | ALT. OC NO. 5  |
|                  |        | PROCESS               |                              | PROCESS        |                      |      |          |                  |           |       |               |                | WELD LIO TO EXCITER  |
| 271              | MATPCA | CHK                   | 1.0                          | TRANSMIT       |                      |      |          |                  |           |       |               |                | WATER TANK HAS NO OC NO.   |
|                  |        | SETUP                 |                              | SETUP          |                      |      |          |                  |           |       |               |                | USE NITROGEN TO PURGE  |
|                  |        | PROCESS               |                              | PROCESS        |                      |      |          |                  |           |       |               |                | LEAK TEST. TIME INCLUDES AVG. RETURN.  |

1507000000



## OPERATION PROFILE

| NAME <u>R. Hunt</u> |        | ALC <u>OKC</u>        |                              | DATE <u>8-10-89</u>   |                        | RCC <u>MATPCA</u> |      | SHEET <u>1 of 1</u> |                |      |                 |   |   |
|---------------------|--------|-----------------------|------------------------------|-----------------------|------------------------|-------------------|------|---------------------|----------------|------|-----------------|---|---|
| ID# <u>98001A</u>   |        | WCD <u>CAEC07</u>     |                              | WCD DATE <u>89045</u> |                        |                   |      |                     |                |      |                 |   |   |
| OPERATION NUMBER    | ECO    | OPERATION DESCRIPTION | LABORATORY OCCURRENCE FACTOR | OPERATION TYPE        | LABORATORY FLOW RATE % | SHELL CODE LEVEL  | QTY. | TIME REQUIRED %     | EQUIPMENT CODE | QTY. | TIME REQUIRED % | DATA SOURCE COMMENTS  |   |
| 55                  | MATPCA | IN DATA               | 1.0                          | TRANSIT               |                        |                   |      |                     |                |      |                 |   |   |
|                     |        |                       |                              | SETUP                 |                        |                   |      |                     |                |      |                 |   |   |
|                     |        |                       |                              | PROCESS               |                        |                   |      |                     |                |      |                 |   |   |
| 70                  | MATPCA | WELD                  | 1.0                          | TRANSIT               |                        |                   |      |                     |                |      |                 | ALT DE NUS<br>AAB:<br>4907,5760,<br>5718,5719,5721,<br>5723,4906,<br>5802,5801,<br>4908 |   |
|                     |        |                       |                              | SETUP                 |                        |                   |      |                     |                |      |                 |   | 500 ALT. NUS<br>IN OP. 55               |
|                     |        |                       |                              | PROCESS               |                        |                   |      |                     |                |      |                 |   | WELD FILLER<br>'AND' 11.1<br>CONVERTED. |
| 270                 | MATPCA | WELD                  | 1.0                          | TRANSIT               |                        |                   |      |                     |                |      |                 | 500 ALT. NUS<br>IN OP. 55   |   |
|                     |        |                       |                              | SETUP                 |                        |                   |      |                     |                |      |                 |   | WELD 1.0 TO<br>EXC. 178.                |
|                     |        |                       |                              | PROCESS               |                        |                   |      |                     |                |      |                 |   |   |
| 271                 | MATPCA | CHK                   | 1.0                          | TRANSIT               |                        |                   |      |                     |                |      |                 | WATER TANK<br>HAS NO O2<br>NO. 1, LEAK<br>CHECK USING<br>NITROGEN.                      |   |
|                     |        |                       |                              | SETUP                 |                        |                   |      |                     |                |      |                 |   |   |
|                     |        |                       |                              | PROCESS               |                        |                   |      |                     |                |      |                 |   |   |



TECHNOLOGY INSERTION ENGINEERING  
SERVICES PROGRAM

CONTROL NO. 89-039F

TI PROGRAM  
COST BENEFIT ANALYSIS REPORT

ALC OC DATE 05/13/89  
RCC MATPCA ITEM NO. ---  
NOUN "General Suggestion"

IO # 3

TYPE PROPOSAL

- ☐ QUICK FIX  
☒ FOCUS STUDY  
☐ OTHER

CURRENT METHOD

Much of the present testing equipment found in the MATPCA work areas are outdated and exhibit long down-times for repair. Both the technicians and the first line supervisory personnel express dissatisfaction with this equipment.

PROPOSED METHOD

A detailed study of the testing equipment should be performed in conjunction with an analysis of the forecasted demand of the presently worked items. If economically feasible, the testing equipment should be replaced with newer, more generalized testing equipment.

BENEFIT OF CHANGE

The benefits would be threefold:

- (A) faster, more accurate testing of the individual items.
- (B) Reduced down-time and lower maintenance costs of test equipment.
- (C) more effective use of skilled employees time.

PRODUCTIVITY IMPROVEMENT SUMMARY



VIEW-351



TECHNOLOGY INSERTION ENGINEERING  
SERVICES PROGRAM

CONTROL NO. 89-036F

TI PROGRAM  
COST BENEFIT ANALYSIS REPORT

ALC DC DATE 05/13/89  
RCC MATKA ITEM NO. -  
NOUN "General Suggestion"

PIO # 4

TYPE PROPOSAL

- ☐ QUICK FIX  
☒ FOCUS STUDY  
☐ OTHER

CURRENT METHOD

Several replacement parts shipped from outside manufacturers have been noted to have high failure rates after installation. Many of these items are electrical parts used in the accessory units worked by the MATPCA area. These electrical parts have a high damage potential from moisture and several cases of improper packaging at the factory have been blamed for these failures.

PROPOSED METHOD

A parts tracking procedure should be designed and implemented that would identify the number and origin of failed parts drawn from new stock. This could easily be done by installing the appropriate data processing system into the existing system, and noting occurrences of failures at the existing computer terminals already in place (notably the supervisors offices).

BENEFIT OF CHANGE

The benefits of this system, especially if incorporated into a large number of USAF support operations, could prove to be immense. The present system depends solely on the reporting of incidence of abnormal failure rates by the technicians themselves.

PRODUCTIVITY IMPROVEMENT SUMMARY



3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041

**COST BENE, ( .CULATIONS**

**VIC102-351**



# TECHNOLOGY INSERTION ENGINEERING SERVICES PROGRAM

CONTROL NO. 81-054F

## TI PROGRAM COST BENEFIT ANALYSIS REPORT

ALC OC DATE 5/8/89  
RCC MATPCW ITEM NO. —  
NOUN General suggestion

PAUL PARKER

PIO # 5

### TYPE PROPOSAL

- ☐ QUICK FIX  
☒ FOCUS STUDY  
☐ OTHER

### CURRENT METHOD

Long delay times are occurring in backshop (specifically MATPCM and MATPCW) operation on items sent from MATPCA electrical repair unit. Time spent at backshop across ranges from 24.0 - 72.0 hours. (These delays are seen in other backshop operations involving other Accs).

### PROPOSED METHOD

A detailed analysis of delivery schedules, operation times, and idle time after work completed should be performed. This data should be compared to revised and updated demand scheduler for each item sent to back shop.

### BENEFIT OF CHANGE

This analysis is important so that we may effectively streamline all operations for a particular end item as well as provide a quicker response time for return to inventory (critical in a defense industry) of critical parts. It would allow increased productivity and more effective utilization of existing facilities and staff.

### PRODUCTIVITY IMPROVEMENT SUMMARY



## COST BENEFIT CALCULATIONS

**FILE JSI**



TECHNICAL 3Y INSERTION ENGINEERING  
SERVICES PROGRAM

CONTROL NO. 8 - 26F

TI PROGRAM  
COST BENEFIT ANALYSIS REPORT

ALC OC DATE 5/16/89  
RCC MATKA ITEM NO. -  
NOUN General Suggestion

PHIL PERKER

PJO # 9

TYPE PROPOSAL

- ☐ QUICK FIX  
☒ FOCUS STUDY  
☐ OTHER

CURRENT METHOD

Many of the items worked in this RCC have RTV or potting compound used to anchor internal components as well as provide insulation. These materials are tedious to remove, requiring a great deal of skilled technician's time.

PROPOSED METHOD

A study should be performed to determine whether formed rubber housings or sheets could be substituted for the presently used RTV or potting compounds. Also, the use of phenolic blocks formed to hold components in place should be analyzed.

BENEFIT OF CHANGE

A great deal of time and effort could be reduced on the targeted electrical items if these suggested methods prove feasible. More effective use of resources and skilled technicians would occur.

PRODUCTIVITY IMPROVEMENT SUMMARY



התאחדות העובדים הכללית

**COST BENEFIT CALCULATIONS**

YIC102-351



TECHNOLOGY INSERTION ENGINEERING  
SERVICES PROGRAM

CONTROL NO. 81-257F

TI PROGRAM  
COST BENEFIT ANALYSIS REPORT

ALC OC DATE 05/13/69

RCC MAT PCA ITEM NO. —

NOUN "General Suggestion" - ALC wide

PIU, Author

PIU # 12

TYPE PROPOSAL

☐ QUICK FIX

☒ FOCUS STUDY

☒ OTHER Health & Safety

CURRENT METHOD

Several different types of hand tools have been observed in use in the Electrical Components Overhaul ACE (MATPCA). Many of these tools do not conform to presently recommended Occupational Ergonomic - Human Factors standards.

PROPOSED METHOD

The replacement of many of the presently used hand tools, both manual and power, by ergonomically sound designs would increase worker efficiency by decreasing fatigue and wasted effort, as well as reduce the costs of worker compensation claims and lost time due to injury.

BENEFIT OF CHANGE

A great deal of information has been collected in recent years pertaining to the effects that incorrectly designed tools have on industrial workers. Decreased productivity as well as debilitating illnesses such as Carpal Tunnel Syndrome and Recurring Tendonitis have been clearly demonstrated. These problems are easily corrected by selection of the proper tool designs (See attached data).

PRODUCTIVITY IMPROVEMENT SUMMARY



## COST BENEFIT CALCULATIONS

$$\left( \frac{\text{DELTA COST}}{12 \text{ MO. SCHEDULE}} \right) = \frac{\text{1-YEAR SAVINGS}}{\text{1-YEAR SAVINGS}}$$

## IMPLEMENTATION COSTS

[illegible]

**NOTES:**

**EXTENDED SAVINGS**

DELTA COST      5 YR PROJECTION

**TOTAL SAVINGS**

## SUMMARY

|                      | <u>ANNUAL</u> | <u>EXTENDED</u> |
|----------------------|---------------|-----------------|
| GROSS SAVINGS        | \$ _____      | \$ _____        |
| IMPLEMENTATION COSTS | _____         | _____           |
| NET SAVINGS          | \$ _____      | \$ _____        |

**VIC102-351**



TECHNOLOGY INSERTION ENGINEERING  
SERVICES PROGRAM

CONTROL NO. 87-USD-E

TI PROGRAM  
COST BENEFIT ANALYSIS REPORT

ALC OC DATE 5/15/87  
RCC MATKA ITEM NO. —  
NOUN General suggestion

PHI Parker

PIB # 15-

TYPE PROPOSAL

- ☐ QUICK FIX  
☒ FOCUS STUDY  
☐ OTHER

CURRENT METHOD

Presently, an old refrigerator packed with dessicant is being used as a humidity control chamber. Many of the internal components of items worked in this Acc have a high damage potential from moisture exposure.

PROPOSED METHOD

The presently used system is very inadequate given the needs of this Acc. A specifically designed humidity control chamber should be purchased for use in this area.

BENEFIT OF CHANGE

A much lower rate of moisture damaged components, as reported by the individual technicians, would be seen. This would save restocking costs of damaged components, as well as reduce costs of repeated repairs due to damage.

PRODUCTIVITY IMPROVEMENT SUMMARY



## COST BENEFIT CALCULATIONS

[illegible]



TECHNOLOGY INSERTION ENGINEERING  
SERVICES PROGRAM

CONTROL NO. 61-59F

TIP PROGRAM  
COST BENEFIT ANALYSIS REPORT

ALC DC DATE 5/18/89  
RCC MATPCA ITEM NO. 35113A  
NOUN Control Relay Box

PHIL Antek

PIC # 16

TYPE PROPOSAL

- ☐ QUICK FIX  
☒ FOCUS STUDY  
☐ OTHER

CURRENT METHOD

The amplifier asse. for this control box is not corded any repairable time, even though existing technicians report that they can usually repair the component.

PROPOSED METHOD

This amplifier asse. should be made a repairable item with standard overhaul time assigned to this task.

BENEFIT OF CHANGE

Technician report that the replacement costs for this item is \$2700.00, which a detail cost analysis has not yet been authorized, savings of repair vs. replacement of each component should be significant.

PRODUCTIVITY IMPROVEMENT SUMMARY



## COST BENEFIT CALCULATIONS

[illegible]

## CONCLUSIONS

$$\left( \frac{\text{DELTA COST}}{\text{12 MO. SCHEDULE}} \right) = \frac{\text{1st YEAR SAVINGS}}{\text{12 MO. SCHEDULE}}$$

[illegible]

TOTAL COST

[illegible]

**NOTES:**

## EXTENDED SAVINGS

$$\left( \frac{\quad}{\text{DELTA COST}} \right) - \left( \frac{\quad}{\text{\$ YR PROJECTION}} \right) = \text{TOTAL SAVINGS}$$

|                      | SUMMARY       |                 |
|----------------------|---------------|-----------------|
|                      | <u>ANNUAL</u> | <u>EXTENDED</u> |
| GROSS SAVINGS        | \$ _____      | \$ _____        |
| IMPLEMENTATION COSTS | _____         | _____           |
| NET SAVINGS          | \$ _____      | \$ _____        |

ISC-20131A



TECHNOLOGY INSERTION ENGINEERING  
SERVICES PROGRAM

CONTROL NO. 87-40F

TI PROGRAM  
COST BENEFIT ANALYSIS REPORT

TYPE PROPOSAL

- ☐ QUICK FIX  
☒ FOCUS STUDY  
☐ OTHER \_\_\_\_\_

ALC QC DATE 5/19/89  
RCC MATHEA ITEM NO. -  
NOUN General Suggestion

PNW Parker

PJO # 17

CURRENT METHOD

Many internal components for items worked by this RCC are not assigned repairable time. Many of these components could be repaired by existing skilled technicians.

PROPOSED METHOD

A detailed cost analysis should be performed on repair vs. replacement of individual internal components on a variety of items worked by this RCC.

BENEFIT OF CHANGE

The cost savings possible in this analysis may prove very attractive given present economic considerations.

PRODUCTIVITY IMPROVEMENT SUMMARY



## COST BENEFIT CALCULATIONS

[illegible]



TECHNOLOGY INSERTION ENGINEERING  
SERVICES PROGRAM

CONTROL NO. 87-061F

TI PROGRAM  
COST BENEFIT ANALYSIS REPORT

TYPE PROPOSAL

- ☐ QUICK FIX  
☒ FOCUS STUDY  
☐ OTHER

ALC OC DATE 5/19/85  
RCC MARKA ITEM NO. 35/11A  
NOUN Auto. Ignition Actuator

PHIL PERKER

PEO # 18

CURRENT METHOD

Presently, if the switch assembly in the cover housing is inoperative, the entire housing assembly must be replaced at a cost of \$800<sup>00</sup> per assembly. The switch is installed into the housing using a special potting compound, which is unavailable from the vendor.

PROPOSED METHOD

Technicians report that if given the potting compound, they can replace the switch at a cost of ~\$100<sup>00</sup>.

BENEFIT OF CHANGE

As stated, if the potting compound can be acquired from Bendix, who also produces the cover housing, the cost benefit would be approximately \$700<sup>00</sup> per item worked.

PRODUCTIVITY IMPROVEMENT SUMMARY



YIC102-351



TECHNOLOGY INSERTION ENGINEERING  
SERVICES PROGRAM

CONTROL NO. 87-062F

TI PROGRAM  
COST BENEFIT ANALYSIS REPORT

ALC OC DATE 5/25/89  
RCC DATA ITEM NO. 34252A  
NOUN Fluorometer Pwr. Supply

PHIL RACKER

PIO # 19

TYPE PROPOSAL

☐ QUICK FIX

☒ FOCUS STUDY

☐ OTHER

CURRENT METHOD

Presently, the internal circuit boards are not coded any time for repair although technicians are capable of performing these repairs at a relatively low cost in man hours.

PROPOSED METHOD

A focus study should be performed using a detailed cost analysis of the cost benefit of repairing the internal circuit boards of this item vs. replacement of the board assembly.

BENEFIT OF CHANGE

Possible benefits include lower overhaul costs with subsequent savings being utilized in other critical areas.

PRODUCTIVITY IMPROVEMENT SUMMARY



## COST BENEFIT CALCULATIONS

ISC-70131A



**TECHNOLOGY INSERTION ENGINEERING  
SERVICES PROGRAM**

**CONTROL NO.** RRB-QF7

**T1 PROGRAM  
COST BENEFIT ANALYSIS REPORT**

ALC ALL DATE 13 JUN 89  
RCC ALL ITEM NO. \_\_\_\_\_  
NOUN INSPECTION

BOB BUTTRY

**TYPE PROPOSAL**

- ☒ QUICK FIX  
☐ FOCUS STUDY  
☐ OTHER \_\_\_\_\_

**CURRENT METHOD :** QDR'S ARE WRITTEN DESCRIBING KNOWN DISCREPANCIES ON PARTS IN STORAGE. THE STORE'S MANAGER DECIDES ON HIS OWN INITIATIVE IF A PART SO DESCRIBED AS POTENTIALLY DISCREPANT WILL OR WILL NOT BE INSPECTED (SCREENED) FOR THE NOTED QDR DISCREPANCY PRIOR TO RELEASING THESE PARTS FROM THE STORAGE AREA. THIS AFFECTS PRODUCTIVITY AS BAD PARTS ARE FIRST DISCOVERED ON THE PRODUCTION FLOOR.

**PROPOSED METHOD:** REQUIRE ALL PARTS IN STORES TO BE SCREENED FOR QDR NOTED DISCREPANCIES ACCORDING TO A SET CRITERIA RELATING TO THE NUMBER OF PARTS OR THE NUMBER OF TIMES A PART IS FOUND TO BE DISCREPANT ON THE PRODUCTION FLOOR.

**BENEFIT OF CHANGE :** PRODUCTIVITY WILL NOT BE IMPACTED IF DISCREPANT PARTS ARE REMOVED FROM STORES BEFORE SENDING THESE SCREENED PARTS TO THE PRODUCTION FLOOR.

**PRODUCTIVITY IMPROVEMENT SUMMARY:** DOWNTIME AND FLOWTIME WILL BE REDUCED BY REMOVING DISCREPANT PARTS FROM SUSPECT LOTS OF PARTS IN STORAGE PRIOR TO SENDING THESE PARTS INTO PRODUCTION.



REQUESTED COST DATA FOR RRB-QF7

Cost Savings:

Present Condition Cost For the Last 12 Months:

Rework costs associated with repairing supplier parts received from stores and delivered to the production RCC when the noted reason for repair is already documented on a QDR = \$\_\_\_\_\_.

Scrap costs for parts associated for the above = \$\_\_\_\_\_.

Return to supplier (stores) costs for parts associated with the above = \$\_\_\_\_\_.

Labor costs associated with the above parts = \$\_\_\_\_\_.

Proposed Implementation Cost:

Costs either to return or to screen all parts in stores identified as discrepant on a QDR = \$\_\_\_\_\_.

Annual Cost Savings (First Year):

[Present Condition Cost] - [Proposed Implementation Cost] = \$\_\_\_\_\_.



**TECHNOLOGY INSERTION ENGINEERING  
SERVICES PROGRAM**

CONTROL NO. RRB-0E4

**TYPE PROPOSAL**

- ☒ QUICK FIX  
☐ FOCUS STUDY  
☐ OTHER \_\_\_\_\_

**T1 PROGRAM  
COST BENEFIT ANALYSIS REPORT**

COMMAND \_\_\_\_\_ DATE 19 JUN 89  
 ALC WIDE \_\_\_\_\_  
 RCC ALL \_\_\_\_\_ ITEM NO. \_\_\_\_\_  
 NOUN UNCONTROLLED TECH ORDERS

BOB BUTTRY

**CURRENT METHOD :** MECHANICS WORK TO TECH ORDER REQUIREMENTS AS REFERENCED PER WCO INSTRUCTIONS. THE TECH ORDERS ARE USUALLY UNAUTHORIZED AND UNCONTROLLED COPIES THAT THEY KEEP HANDY AT THEIR WORK STATIONS. THESE COPIES ARE SUBJECT TO BEING OUT-OF-DATE AT ANY TIME. THE MECHANICS MAKE NEW COPIES FOR THEIR USE WHEN "WORD OF MOUTH" INFORMS THEM THAT A TECH ORDER REVISION HAS BEEN ISSUED.

**PROPOSED METHOD:** REPLACE ALL TECH ORDER MANUALS WITH PAPERLESS, COMPUTER GENERATED, ELECTRONICALLY UPDATED, CRT-AVAILABLE TECH ORDERS. LOCATE THE CRT'S SO THAT THEY ARE CONVENIENT AND ACCESSIBLE TO ALL MECHANICS. KEEP THE TECH ORDERS UPDATED SO THAT THE MECHANICS WILL ALWAYS HAVE ACCESS TO THE MOST CURRENT PROCEDURES.

**BENEFIT OF CHANGE:** (1) REPAIRED PARTS WILL ALWAYS BE DONE TO THE CORRECT CONFIGURATION AND PROCEDURE.  
 (2) TECH ORDER MANUALS WILL NOT REQUIRE PERIODIC, TIME CONSUMING UPDATING. (3) TECH ORDER UPDATES WILL OCCUR SIMULTANEOUSLY THROUGHOUT ALL THE ALC'S.

**PRODUCTIVITY IMPROVEMENT SUMMARY:** (1) PERSONNEL WHO USED TO UPDATE TECH ORDER MANUALS CAN BE RETRAINED FOR OTHER DUTIES. (2) PARTS THAT FORMERLY WERE REPAIRED TO OUT-OF-DATE PROCEDURES WILL NOT HAVE TO BE REDONE.



REQUESTED COST DATA FOR RRB-QF4

Cost Savings:

Present Condition Cost For the Last 12 Months:

Rework and scrap costs associated with mechanics repairing parts to unauthorized/uncontrolled copies of technical orders = \$\_\_\_\_\_.

Cost to print, distribute and incorporate all changes to the technical orders = \$\_\_\_\_\_.

Proposed Implementation Cost:

Cost involved to install CRTs on the production floor so that all mechanics will have convenient access to a CRT = \$\_\_\_\_\_.

The special data processing cost required to initiate/implement this system = \$\_\_\_\_\_.

Annual Cost Savings (First Year):

[Present Condition Cost] - [Proposed Implementation Cost] = \$\_\_\_\_\_.



TECHNOLOGY INSERTION ENGINEERING  
SERVICES PROGRAM

CONTROL NO. RRB-QF2

TI PROGRAM  
COST BENEFIT ANALYSIS REPORT

COMMAND  
ALC WIDE DATE 19 JUN 89  
RCC ALL ITEM NO.  
NOUN NEW PART IDENTIFICATION

TYPE PROPOSAL

- ☒ QUICK FIX  
☐ FOCUS STUDY  
☐ OTHER

**CURRENT METHOD:** USUALLY, ONLY THE OUTER PACKAGING OF NEW PARTS HAS THE SUPPLIER'S CONTRACT NUMBER. VENDOR CODE, AND DATE OF MANUFACTURE. THIS IDENTIFICATION MAY BE LOST IF THE PART IS REMOVED FROM ITS OUTER PACKAGING IN ORDER TO BE STAGED FOR INSTALLATION. IF, DURING INSTALLATION, A PART IS FOUND TO BE DISCREPANT, A QDR MAY NOT RESULT IN SUPPLIER CORRECTIVE ACTION DUE TO THE LACK OF ANY OF THIS I.D. INFORMATION ON THE QDR.

**PROPOSED METHOD:** MANDATE A GENERAL CONTRACT P.O. REQUIREMENT THAT THE ABOVE 3 PIECES OF I.D. BE AFFIXED TO EACH PART BY THE SUPPLIER PER AN ACCEPTABLE METHOD. THE P.O. SHOULD ALSO STIPULATE THAT THE PART(S) MAY BE RETURNED TO THE SUPPLIER WHENEVER THE OUTER PACKAGE IS OPENED AND THE NOTED I.D. INFORMATION IS MISSING.

**BENEFIT OF CHANGE:** (1) SUPPLIERS WILL BE REQUIRED TO TAKE CORRECTIVE ACTION FOR EVERY SUPPLIER RELATED QDR. (2) ALL SUPPLIER RELATED QDR'S WILL BE ANSWERED IN A TIMELY MANNER. (3) NO PARTS STILL UNDER WARRANTY WILL BE SCRAPPED OR REPAIRED AT THE EXPENSE OF THE ALC.

**PRODUCTIVITY IMPROVEMENT SUMMARY:** THERE WILL BE LESS DOWNTIME FROM RECURRING DISCREPANCIES FOR NEW PARTS AS SUPPLIERS ARE REQUIRED TO ACCEPT THE RESPONSIBILITY FOR CORRECTIVE ACTION ON QDR'S WITH PROPERLY DOCUMENTED PART IDENTIFICATION.



REQUESTED COST DATA FOR RRB-QF2

Cost Savings:

Cost Improvement Data:

Present Condition Cost For the Last 12 Months:

Cost to replace all new purchased parts that were scrapped at the expense of the ALC due to the lack of necessary supplier I.D. at installation = \$\_\_\_\_\_.

Cost to repair all new purchased parts at the expense of the ALC due to the lack of necessary supplier I.D. at installation = \$\_\_\_\_\_.

Proposed Implementation Cost:

Cost incurred by ALC purchasing office to insert the noted P.O. requirement (ref. "Proposed Method," page 1) = \$\_\_\_\_\_.

Estimated additional annual cost by all ALC new parts suppliers to implement the noted I.D. requirement as specified (ref. "Proposed Method," page 1) = \$\_\_\_\_\_.

Annual Cost Savings (First Year):

[Present Condition Cost] - [Proposed Implementation Cost] = \$\_\_\_\_\_.



**TECHNOLOGY INSERTION ENGINEERING  
SERVICES PROGRAM**

CONTROL NO. RRB-QF1

**TI PROGRAM  
COST BENEFIT ANALYSIS REPORT**

COMMAND \_\_\_\_\_  
ALC WIDE \_\_\_\_\_ DATE 19 JUN 89  
RCC ALL \_\_\_\_\_ ITEM NO. \_\_\_\_\_  
NOUN NEW PART WARRANTIES \_\_\_\_\_

BOB BUTTRY

**TYPE PROPOSAL**

- ☒ QUICK FIX  
☐ FOCUS STUDY  
☐ OTHER \_\_\_\_\_

**CURRENT METHOD :** SUPPLY RECEIVES AND STORES NEW SUPPLIER PARTS FOR SUBSEQUENT DISTRIBUTION AND USAGE BY ALC SHOPS. NO STOCK ROTATION METHOD IS BEING USED TO ASSURE A "FIRST IN - FIRST OUT" DISTRIBUTION OF THESE PARTS. NEW PARTS HAVE A WARRANTY THAT IS VALID FOR A SPECIFIED PERIOD OF TIME. THIS WARRANTY BECOMES VOID WHEN DISCREPANT NEW PARTS ARE NOT DISCOVERED WITHIN THIS TIME PERIOD.

**PROPOSED METHOD :** TO AVOID THE ABOVE, SUPPLY SHOULD DATE STAMP EVERY PART, OR THE OUTER PACKAGE OF EVERY PART, AS IT IS RECEIVED. SUPPLY SHOULD THEN STORE AND ROTATE THE NEW PARTS STOCK SO THAT THE OLDEST DATE STAMPED PART IS ISSUED TO THE PRODUCTION SHOP FIRST.

**BENEFIT OF CHANGE:** (1) SUPPLIERS OF DISCREPANT PARTS UNDER WARRANTY WILL BE REQUIRED TO REPLACE OR REPAIR THEM AT NO COST TO THE ALC. (2) THE DISCOVERY OF NUMEROUS DISCREPANT PARTS WITHIN A CONTRACT LOT USUALLY ALLOWS THE ALC TO RETURN THAT ENTIRE LOT TO THE SUPPLIER FOR PARTS SCREENING AND SUBSEQUENT REPLACEMENT OR REPAIR AT THE SUPPLIER'S EXPENSE. (3) SUPPLIER CORRECTIVE ACTION BECOMES MORE TIMELY, RESPONSIVE, AND EFFECTIVE. (4) UNRELIABLE SUPPLIERS ARE ELIMINATED EARLY-ON.

**PRODUCTIVITY IMPROVEMENT SUMMARY:** CYCLE AND FLOW TIMES BECOME REDUCED WHEN MECHANICS NO LONGER MUST REPAIR NEW PARTS PRIOR TO USING THEM.

USE/AMEND

OR IN ACCORDANCE WITH THE  
WARRANTY TERMS.



REQUESTED COST DATA FOR RRB-QF1

Cost Savings:

Present Condition Cost For the Last 12 Months:

- (A) Cost of scrapping all new purchased parts at the expense of the ALC due to expired warranties = \$\_\_\_\_\_.
- (B) Cost of repairing all new purchased parts at the expense of the ALC due to expired warranties = \$\_\_\_\_\_.

Proposed Implementation Cost:

Labor costs involved to date stamp the new purchased parts and rotate the oldest stock forward during the storage of new parts = \$\_\_\_\_\_.

Annual Cost Savings (First Year):

[Present Condition Cost] - [Proposed Implementation Cost] = \$\_\_\_\_\_.



TECHNOLOGY INSERTION ENGINEERING  
SERVICES PROGRAM

CONTROL NO. 81-0082

TI PROGRAM  
COST BENEFIT ANALYSIS REPORT

ALC OC DATE 05/19/89  
RCC MATERIA ITEM NO. 97133A  
NOUN Electronics 3-way select valve

Public Parker

PIO # 13

TYPE PROPOSAL

- ☒ QUICK FIX  
☐ FOCUS STUDY  
☐ OTHER

CURRENT METHOD

Most of those items have one part blocked off. They are used for hot air bleed-off purposes. Originally, the third part was used for fuel transfer. When overhauled, the item is required by technical order to be tested on the fuel transfer test stand in building 3108.

PROPOSED METHOD

Since the item is no longer used in its originally designed manner, and the third part (fuel) is blocked off by the purchasing organization, the required testing procedure should be deleted.

BENEFIT OF CHANGE

By deleting the unnecessary test, turnaround on this item would be shortened by one hour for each individual 3-way select valve. This would free skilled technicians for other duties, free testing equipment for other uses, and otherwise reduce operating expenses.

PRODUCTIVITY IMPROVEMENT SUMMARY



## OLD METHOD

[illegible]

| DELTA COST | NO. SCHEDULE | 1 <sup>st</sup> YEAR SAVINGS |
|------------|--------------|------------------------------|
|            |              |                              |

# Dr. H. G. SCHMIDT

**10 YEAR SAVINGS**

[illegible]**TOTAL COST**[illegible]

## STIMULUS

|                       | DELTA COST | 3 YR PROJECTION |
|-----------------------|------------|-----------------|
| 1. Initial Investment |            |                 |
| 2. Operating Costs    |            |                 |
| 3. Maintenance Costs  |            |                 |
| 4. Replacement Costs  |            |                 |
| 5. Salvage Value      |            |                 |
| 6. Total Cost         |            |                 |

**1903 Y173n**

# 3 YR PROTECTION

**TOTAL SAVINGS**

|                      | ANNUAL   | EXTENDED |
|----------------------|----------|----------|
| GROSS SAVINGS        | \$ _____ | \$ _____ |
| IMPLEMENTATION COSTS | _____    | _____    |
| NET SAVINGS          | \$ _____ | \$ _____ |

## NET SAVINGS

—

5

**RICIUS!**



TECHNOLOGY INSERTION ENGINEERING  
SERVICES PROGRAM

CONTROL NO. 89-0118

TI PROGRAM  
COST BENEFIT ANALYSIS REPORT

TYPE PROPOSAL

- ☒ QUICK FIX  
☐ FOCUS STUDY  
☐ OTHER

ALC OC DATE 05/05/89  
RCC MATRA ITEM NO. 38669A  
NOUN Ignition Exciter Leak Check.  
OH # 123

PIO # 2

CURRENT METHOD

The ignition exciter unit is filled with high pressure Nitrogen gas and heated in an oven. After the unit is cooled it is placed in a water bath to check for leakage. The water bath must be at a specific temperature (?) to perform the test. It was noted that shop personnel routinely reduce the bath's temperature to prevent the water level from evaporating.

PROPOSED METHOD

It is suggested that the installation of an insulated cover on the existing water bath would maintain required heat while subsequently reducing the evaporation rate of the bath.

BENEFIT OF CHANGE

As the above described leak test is a one minute operation, and the heating time required for the water bath is ~15-20 minutes, it would appear that operator productivity would be enhanced significantly by maintaining the water bath's temperature at or near the optimal test range. The proposed change should be relatively inexpensive with no impact on work load occurring.

PRODUCTIVITY IMPROVEMENT SUMMARY

LSC 20131A



[illegible]



TECHNOLOGY INSERTION ENGINEERING  
SERVICES PROGRAM

TI PROGRAM  
COST BENEFIT ANALYSIS REPORT

ALC DC DATE 5/19/89  
RCC MAT/EA ITEM NO. 97133A  
NOUN Electronics 3-way valve

PAUL PARKER

PJO # 14

CONTROL NO. 81-212

TYPE PROPOSAL

- ☒ QUICK FIX  
☐ FOCUS STUDY  
☐ OTHER \_\_\_\_\_

CURRENT METHOD

No specific requirement for testing this item with compressed air before it is placed on the fuel transfer station now exists. Operator preference is the determinant as to WHETHER this operation is performed.

PROPOSED METHOD

Initial leak testing with compressed air before placement on the fuel transfer station should be made a specified requirement for this valve. (This is dependent on outcome of PJO control number suggestion, which deletes the fuel transfer testing procedure entirely)

BENEFIT OF CHANGE

By testing the valve assembly with compressed air, and thereby determining whether leaks actually exist, the possibility of lost time in transportation and set-up on the fuel transfer equipment will be removed.

PRODUCTIVITY IMPROVEMENT SUMMARY



## COST BENEFIT CALCULATIONS

[illegible]



# TECHNOLOGY INSERTION ENGINEERING SERVICES PROGRAM

CONTROL NO. 87-0110

## T1 PROGRAM COST BENEFIT ANALYSIS REPORT

ALC OC DATE 5/10/89

RCC MATPCA ITEM NO. 38645A

NOUN TEMP AMPLIFIER

PAUL BERKE

PZO # 7

### TYPE PROPOSAL

- ☒ QUICK FIX  
☐ FOCUS STUDY  
☐ OTHER

### CURRENT METHOD

The A3 module of this item requires approximately 9.0 hours to remove and replace. This is due to it being a "select fit" component. This means that the electrical specifications and tolerances must be determined through testing before installation can occur.

### PROPOSED METHOD

Technicians report that when the individual specifications for an A3 module are provided by the vendor, they have tested within limits at this installation. It is therefore suggested that all A3 modules have their factory determined specifications sent with them to this AEC.

### BENEFIT OF CHANGE

Technicians report that by utilizing the factory specifications of the A3 module, and thereby deleting the initial testing procedures, installation time can be reduced from 9.0 hours to 3.0 hours for this component. Turnaround to Air Force inventory is shortened, more effective use of existing resources is accomplished, and more productive use of skilled technicians can occur.

### PRODUCTIVITY IMPROVEMENT SUMMARY



## COST BENEFIT CALCULATIONS

[illegible]



TECHNOLOGY INSERTION ENGINEERING  
SERVICES PROGRAM

CONTROL NO. \_\_\_\_\_

TI PROGRAM  
COST BENEFIT ANALYSIS REPORT

ALC DL DATE 5/19/85

RCC MATPCA ITEM NO. 61234A

NOUN Ignition Exciter

APPROVED BY \_\_\_\_\_

PILO # 8

TYPE PROPOSAL

- ☒ QUICK FIX  
☐ FOCUS STUDY  
☐ OTHER \_\_\_\_\_

CURRENT METHOD

Presently this item is not targeted as a selective overhaul (MATROC) item. Technicians routinely perform a diagnostic test on this exciter, and they report a 50% failure rate. This failure rate includes replacement of the internal transformer unit for pitting due to arcing damage.

PROPOSED METHOD

By designating this ignition exciter as a MATROC item, and requiring that an initial functional test be performed, it is reasonable to assume that 50% of all items processed would be ready to return to inventory in one to two hours. It is also suggested that a time limit for visual inspection of the internal transformer be set at two to three years intervals (applicable to overhaul facilities).

BENEFIT OF CHANGE

The benefits of this change would include quicker turnaround time and return to A.F. inventory, better utilization of resources and skilled technicians, and reduced operating costs.

PRODUCTIVITY IMPROVEMENT SUMMARY



**THE UNIVERSITY OF CHICAGO**

11

ISC-20131A



TECHNOLOGY INSERTION ENGINEERING  
SERVICES PROGRAM

CONTROL NO. 87-0000

TI PROGRAM  
COST BENEFIT ANALYSIS REPORT

ALC 05 DATE 5/16/89  
RCC MATPCA ITEM NO. 50217A  
NOUN Ign. Exciter

PHIL Parker

PEO #10

TYPE PROPOSAL

- ☒ QUICK FIX  
☐ FOCUS STUDY  
☐ OTHER \_\_\_\_\_

CURRENT METHOD

This ignition exciter uses a potting compound to anchor the internal components as well as act as an insulator for them. This compound must be chipped out for overhaul purposes.

PROPOSED METHOD

Use of RTV sealant as in the case of other related ignition exciters is suggested.

BENEFIT OF CHANGE

The use of the RTV sealant would expedite internal component removal during overhaul making better use of present resources and saved technician's time.

PRODUCTIVITY IMPROVEMENT SUMMARY



## COST BENEFIT CALCULATIONS

[illegible]



TECHNOLOGY INSERTION ENGINEERING  
SERVICES PROGRAM

CONTROL NO. 89-0392

TI PROGRAM  
COST BENEFIT ANALYSIS REPORT

ALC DC DATE 5/19/89  
RCC MATPCA ITEM NO. 50317A  
NOUN Ignition Exciter

ANIL Parker

PIO # 11

TYPE PROPOSAL

- ☒ QUICK FIX  
☐ FOCUS STUDY  
☐ OTHER

CURRENT METHOD

Presently this item is not targeted as a selective overhaul (MATROC) item. Technicians routinely perform a diagnostic test on this exciter, and they report a 50% failure rate. This failure rate includes replacement of the internal transformer unit for pitting due to arcing damage.

PROPOSED METHOD

By designating this ignition exciter as a MATROC item and requiring that an initial functional test be performed, it is reasonable to assume that 50% of all items processed would be ready to return to inventory in one to two hours. It is also suggested that a time limit for visual inspection of the internal transformer be set at two to three years intervals (applicable to overhaul facilities).

BENEFIT OF CHANGE

The benefits of this change would include quicker turnaround time and return to A.F. inventory, better utilization of resources and skilled technicians, and reduced operating costs.

PRODUCTIVITY IMPROVEMENT SUMMARY



# התכנית החדשה

## COST BENEFIT CALCULATIONS

[illegible]



**TECHNOLOGY INSERTION ENGINEERING  
SERVICES PROGRAM**

CONTROL NO. RRB-FS2

**TI PROGRAM  
COST BENEFIT ANALYSIS REPORT**

ALC ALL DATE 13 JUN 89

RCC ALL ITEM NO. \_\_\_\_\_

NOUN SCRAP \_\_\_\_\_

BOB BUTTRY

**TYPE PROPOSAL**

- ☐ QUICK FIX  
☒ FOCUS STUDY  
☐ OTHER \_\_\_\_\_

**CURRENT METHOD:** PRODUCTION OPERATIONS GENERATE SCRAP THROUGH A VARIETY OF CAUSES. THIS SCRAP IS ORDINARILY REMOVED FROM THE RCC FOR DISPOSAL, ALONG WITH THE ACCOMPANYING WCD'S.

**PROPOSED METHOD:** EACH RCC SHOULD MAINTAIN A SCRAP LOGBOOK THAT LISTS EACH PART AS IT IS SCRAPPED AND THE CAUSE FOR SCRAPPING THE PART.

**BENEFIT OF CHANGE:** A PERIODIC REVIEW OF AN RCC'S SCRAP LOGBOOK COULD BE USED TO DETERMINE HOW TO REDUCE EXCESSIVE SCRAP BY IMPLEMENTING METHODS TO ELIMINATE, OR REDUCE, THE REPETITIVE CAUSES FOR SCRAPPING PARTS.

**PRODUCTIVITY IMPROVEMENT SUMMARY:** PRODUCTIVITY IMPROVEMENT IS DIRECTLY RELATED TO REDUCING SCRAP BY CORRECTLY REPAIRING A PART OVER THE SAME TIME PERIOD THAT A PART PREVIOUSLY WAS INCORRECTLY REPAIRED. ALSO, MATERIAL WASTE IS REDUCED BY NOT HAVING TO DISPOSE OF THE SCRAPPED PART. ALSO SAVES COST OF PURCHASING A BRAND NEW REPLACEMENT PART.



**REQUESTED COST DATA FOR RRB-FS2**

**Present Condition Cost for Last 12 Months:**

Annual cost associated with maintaining a scrap logbook within each RCC. Each part scrapped must be identified, dated, and the reason for scrap indicated.

Cost of Logbook(s) = \$ \_\_\_\_\_

Labor Cost for Entries = \$ \_\_\_\_\_



J. CARTER

4-25-89

PID#1

ON ENTERING AREA (CA) MY FIRST OBSERVATION WAS THE ODDOR OF TRI-CHLOR ETHANE USED AS A DEGREASER. FROM PAST EXPERIENCE, I HAVE FOUND TRI-CHLOR TO BE A DIFFICULT CHEMICAL TO WORK WITH. BIO-ACT IS A NATURAL DEGREASER THAT IS BIO-DEGRADABLE MATERIAL THAT WHEN CONTAMINATED, MAY BE DISPOSED OF BY INCENERATION. TEST EQUIPMENT WAS SOMEWHAT ANTIQUATED, BUT CENTRALLY LOCATED AND EASILY ACCESSABLE BY ALL. TECHNICIANS LIGHTING WAS ADEQUATE, AREA WAS CLEAN, AND COMPARABLE TO MOST FABRICATION FACILITIES. THE TECHNICIANS SEEMED WELL TRAINED & QUITE COMPETANT FOR ASSIGNED TASKS.

4-26-89

PID#2

OBSERVED PHYSICAL MEASURING OF CASTINGS & MACHINED PARTS. METHODS USED WERE CONVENTIONAL MICROMETERS & STANDARD INSPECTION INSTRUMENTS. THE USE OF A SMALL "CORDAX" (COORDINANT MEASURING) MACHINE WOULD ENHANCE DIMENSIONAL CREDIBILITY.



4.27

PID#3 OBSERVED EXCESSIVE, MOISTURE INDUCED, CONTAMINATION OF CASES, RESULTING IN RE-CLEANING OF CASES. A CLEAN ROOM ENVIRONMENT WOULD ELIMINATE THIS CONDITION. HUMIDITY & TEMPERATURE CONTROL WOULD ENHANCE LONGIVITY OF THE PRODUCT.

4.28

PID#4 OBSERVED MULTI-STEP TESTING OF PRODUCT THIS OPERATION COULD BE IMPROVED BY THE USE OF A "FAULT FINDER" A CNC TEST UNIT WITH A PRINT OUT. THIS WOULD ALSO GIVE TRACEABILITY OF ALL REPAIRS WITH A PERMINANT RECORD.

5-4-89

OBSERVED EXCESSIVE TRANSIT TIME PCA TO PCD.

PID#5 REQUESTS THE TRANSFER OF ONE / ARBOR PRESS TO PCA AREA.

5-5-89 ELECTRONIC TEST BENCH # OC 4929 & OC 3609 WENT DOWN AT APPROX 10:00 HRS & WAS OUT OF SERVICE WITH APPROX. FIFTY COMPLETED UNITS

PID#7 AWAITING TEST. A "QUICK FIX" WOULD BE TO PLACE FIBERGLASS FURNACE FILTERS ON TOP OF LOUVERED CABINATES, REDUCING THE AMOUNT OF CONTAMINATION TO ELECTRONIC COMPONENTS.

PID#8

TEST STAND # OC 5507 THIS UNIT PURCHASED AT COST APPROX \$1.3 MIL. IS MARGINALLY FUNCTIONAL (5%) AND IS NOT COST EFFECTIVE (1.0 MAN HRS TO TEST EXCITERS)



(PID # 8 CONT.)

SIMMONS. THE Q.E.M., HAS A SIMPLE TEST  
STAND THAT CONDUCTS THE SAME TESTS  
IN SEVEN MIN. WITH A PRINT OUT FOR  
Q.A. RECORDS.



PI06 WHILE OBSERVING A TEST OPER, I CHECKED  
THE PREVENTIVE MAINT & CALIBRATION ON  
THE FOLLOWING TEST ITEMS:

OL 3952 - NITROGEN LEAK TEST 20 SEPT 78

OL 3952 ELECTEST BENCH 4-21-89

OL 3953 " " " 7 APR 86

OL 4929 " " " 2-7-86

OVENS (4EA) MAINT ONLY AT BREAKDOWN.  
OIL SIGHT GAGE IMPOSSIBLE TO SEE -  
YEARS OF STAIN BLACKENED THE UNIT.  
TECHNICIANS HAVE NOT BEEN INSTRUCTED  
ON DAILY MAINT. REQUIREMENTS.  
OBSERVED WCD ON 35023A NOT TO  
ACT METHOD. SUGGEST PLANNERS  
CONSULT TECHNICIANS TO VERIFY  
SEQUENCING & METHODS



ENG. NOTES:

JACK CARTER

5-2-89

PCN 42590 FLOW CHART

OP 010 & 015 - REC & VERIFY

PIA 35 OP 020 BREAK SOLDER SEAL ON CASE - OPEN  
DIG OUT EPOXY-FOAM - NOTE - EVERY EFFORT  
SHOULD BE MADE TO DELETE THIS OPER.  
IT IS VERY LABOR INTENSIVE & NOT COST  
EFFECTIVE.

030 MOVE TO TRICHLORTANK FOR CLEANING

040 VISUAL INSPECTION AT WORK BENCH

OP 060 THRU 120 - ELECTRICAL TESTING DONE  
AT TEST STAND - IDENTIFY SUB-STANDARD PARTS

380 REPAIR OR REPLACE PARTS AS REQ'D.

390 REASSEMBLE ALL COMPONENT

PCN 37719A AUTOMATIC PILOT - 48 UNITS

PER MD. NOTE: THIS OPER WILL BE

PHASED OUT OVER THE NEXT TWO TO

THREE YEARS - AREA WAS WELL LIGHTED,

OPERATOR COMPETANT & WELL TRAINED

EQUIPMENT ADEQUATE TO THE ~~FA~~

PRODUCT REQUIREMENTS.







| DATE/PIO # | PIO SUBJECT AND SUPPORTING DATA  | RCC    |
|------------|--|--------|
| 05/05/89   | Interview with Larry Ware (WG-10) on MATPCA Ignition Exciter (38667A) rework. Unit requires several test procedures (see opn. profile). After the initial cleaning, inspection, and testing, the unit is hand-carried to the machine shop (MATPEM) or the mechanic for lid removal. Note that only one machine is normally designated for this task, and that the unit will normally remain at MATPEM for 24 hrs until it returns to MATPCA. The unit is then disassembled, inspected, and several internal items are tested. Parts are removed and replaced as required. After reassembly and testing, the unit is hand-carried to the welding shop (MATPIW) by the mechanic, and the lid is welded on. Time at MATPIW is ~ 24 hrs. | MATPCA |
|            | Note: It appears that rebuild kits are normally ordered (by regulation) only when units are received. This can cause up to 2 day delay for kit receipt into unit. Technicians are ordering extra kits to avoid this.   |        |
|            | Note: If the filter assy (opn 85) is bad, very long delay ( ) due to backshop ( ) turnaround.  |        |
|            | Note: If items replaced with new replacement items, then no requirement to test unit for specific item function. Technicians note high rate of failure of new items (suggest study of actual reliability of new items?). Technicians are presently performing tests.   |        |
|            | Note: water bath being adjusted down to prevent evaporation. Requires ~15-20 minutes to reach optimal heat.  |        |

PIO #2

Suggest the installation of a lid on water bath to reduce evaporation while maintaining heat at operational levels.



| DATE/PIO #         | PIO SUBJECT AND SUPPORTING DATA   | RCC    |
|--------------------|---|--------|
| 5/8/89             | <p>Interview with Larry Ware on Pci 49711A. An initial test is performed on this unit. If the test is OK the unit is routed to inventory. If the unit fails it is routed to overhaul. There is a ~50% failure rate.</p> <p>Note: If the housing must be extended, then the capacitor assy. must be removed to prevent fumes being produced during the welding opn. It should also be noted that due to the nature of this large capacitor assy., there exists a significant electrical hazard associated with this item. Time must be taken in discharging and disassembling this unit.</p> <p>There are several testing procedures involved in the overhaul of this unit. It is also an involved process to disassemble and repair the capacitor assembly. Much of the testing equip. is outdated and prone to long down times, and in some cases modified testing must be performed due to inadequate or missing equipment.</p> <p>Note that there are several cases where inspections and/or tests can indicate that further machining or welding must be performed as support work. The possibility therefore exists that significant time may be spent on any one item in backshop operations.</p> | MATPCA |
| 5/2/89)<br>PIO # 3 | <p>Suggestion that a detailed analysis be performed as to viability of new test equipment (generalized in nature) given decreasing demand of these items.</p>   | 1      |



| DATE/PIO #          | PIO SUBJECT AND SUPPORTING DATA   | RCC    |
|---------------------|---|--------|
| 5/8/85<br>(5/21/85) | (continued) PN 49711A   | MATPCA |
| PIO # 4             | Mr. Ware notes that new parts from the manufacturer are displaying a high failure rate, mainly due to improper packing from the manufacturer.   |        |
|                     | Note: This item is the same as PCN 98001A, except for the gas tube assy. The new gas tube assy. in the 49711A item is KA85 as compared to the older 98001A model's CA132. This modification was to reduce radiation exposure to the employee. |        |



| DATE/PIO # | PIO SUBJECT AND SUPPORTING DATA   | RCC    |
|------------|---|--------|
| 05/08/89   | <p>Interview with Donald Stroud on PCN 30241A. As with most of the ignition exciters, this item requires an initial functional test. If the item tests OK, it is routed back into inventory. The failure rate of this item is reported as ~ 95%, so most items are overhauled. The exciter must be sent to the machine shop (MATPCM) for lid removal. Note that there is significant delay time (24 hrs) before the item is returned to MATPCA. This is due to several factors, especially the fact that currently only one (MATPCM) machine and operator are assigned for this task. Also note that Ms. Stroud reports that 30% of the disassembled units are returned to welding for terminal rework or casing repair. Another 24 hr delay is incurred by this operation. The unit is returned to MATPCA for further overhaul, and sent back to welding for lid replacement. It can be seen that there exists the possibility of a 48-72 hr delay above and beyond the specific time required for repair of the item.</p> <p>Time required for test:<br/>Time coded task:</p> <p>PIO # 5 Suggestion for study of back shop operations for all MATPCA support work. Target MATPCM and MATPEW for long delay times.</p> | MATPCA |



| DATE/PIO # | PIO SUBJECT AND SUPPORTING DATA  | RCC    |
|------------|--|--------|
| 05/09/89   | <p>Interview with Wendel Hawkins on PCN 50078A. This is an ignition exciter which requires an initial function test be performed. It is reported that 90% of the items fail and are overhauled. The other 10% are routed back into the inventory.</p> <p>This item is presently having an Air Force audit performed which requires computer tracking and extra paperwork. This is indicated in the operation profile sheet.</p> <p>The components of this item have a high damage potential when exposed to moisture, which requires that the unit be kept in MATPCA's dehumidifier (which is in actuality an unpowered refrigerator packed with dessicant), long drying times in both the oven and this dehumidifier are required. The unit must be sealed and pressurized so that moisture does not enter the casing. This in turn required a rather high degree of skilled soldering be performed around the casing and input leads. Care must be taken not to heat the casing overly much during this procedure, as internal components are heat sensitive.</p> <p>PIO # 6 Suggest the use of some form of epoxy sealant that would remove the soldering operation. This should save much time and effort by operator.</p> | MATPCA |



| DATE/PIO # | PIO SUBJECT AND SUPPORTING DATA  | REC    |
|------------|--|--------|
| 05/19/89   | Interview with Mr. Wendel Hawkins, WG-10, on ignition exciter (35510A)<br>This item has an initial functional test, the results of which determine rather it is overhauled or returned to inventory. It was reported that this item has a 50% failure rate.<br><br>The testing of internal components in this item is a somewhat complex procedure. Several test stands are required, as well as individual handheld equipment such as ohmmeters and voltmeters.<br><br>Note that if the internal connectors need to be reworked the item must be sent to welding (MATPIW). Approximately 15% of all units require this additional operation. All disassembled units will have the lid removed by MATPCM and replaced by MATPIW. Possible back shop time is therefore 48-72 hours. | MATPCA |



| DATE/PIO #   | PIO SUBJECT AND SUPPORTING DATA  | RCC          |
|--------------|--|--------------|
| 5/10/89<br>1 | Interview with James Dye on<br>PCN 38645A TEMP. AMPLIFIER  | MAT PCA<br>( |
|              | <p>This is a very complex overhaul item. The temp. amplifier is a MATROC item and only 40% fail the initial test and require overhaul. Of these, 95% of the failure involves a module failure. There are five modules, and each will require a different replacement time in the field. Note especially the A3 module. If the A3 module fails, there is an average 9.0 hour repair time involved. This is due to the fact that this is a "select fit" item, which requires individual testing and specifications determination before it can be installed. (See following PIO suggestion).</p> <p>There is a great deal of rewiring and rerouting of wires after a module change. RTV sealant must also be applied over these wires (which is very tedious to remove).</p> <p>Functional testing is performed at three temperatures (ambient and HOT), with most failures occurring at the cold temperatures. A failure at any temperature will stop testing and require troubleshooting be performed. After repair or replacement of parts, testing must be repeated.</p> |              |
|              | <p>PIO # 7 Suggest that manufacturer supply data of related parts for "select fit" items. In the case of A3 module, reduce time from 9.0 hrs to ~3.0 hours for change. (i.e. reduce need for determining existing specifications).</p>   |              |



| DATE/PIO # | PIO SUBJECT AND SUPPORTING DATA  | RCC    |
|------------|--|--------|
| 5/10/89    | Interview with Wallace<br>Wylie on PCN 38643A, Temp.<br>Amplifier.   | MATPCA |
|            | This item is rather complex<br>in both its testing and repair.<br>The amplifier consists of five<br>major internal components, any<br>one of which may cause the<br>item to fail. These internal components<br>are modules numbered 1-5. The<br>individual failure rates are listed on<br>the operation profile sheet for opas.<br>151-153.  |        |
|            | This item is classified as a<br>MATROC item, and requires an<br>initial functional test be performed.<br>80% of all amplifiers of this type<br>tested pass the test. They are then<br>returned to inventory. The other<br>twenty percent require disassembly and<br>replacement of one or more modules.<br>It should be noted that the amplifier<br>interior is sealed with a potting compound<br>which is very difficult to remove. Note<br>that the amplifier fails mostly during<br>the ambient temperature phase of testing. |        |



| DATE/PIO # | PIO SUBJECT AND SUPPORTING DATA   | RCC    |
|------------|---|--------|
| 5/16/89    | Interview with Mr. Humphrey on<br>PCN 61234A, ignition exciter.   | MATROA |
|            | This item is <u>not</u> designated<br>a MATROK item, but most technicians<br>are performing an initial<br>functional test as part of their<br>troubleshooting procedure. This item<br>is reported as having a 40% pass rate<br>of these initial tests. This would<br>seem to indicate that making this a<br>"selective, overhauled" item is a viable<br>option. |        |
|            | Note that there are several internal<br>components in this exciter which can<br>fail, and each of these will take<br>a different repair time. Also note that<br>there is often the possibility of more<br>than one internal component failing<br>at any one time.   |        |
|            | It should be mentioned that this<br>exciter's tube assemblies are installed<br>in a formed rubber casing. This casing<br>is easily removed and prevents arcing<br>while installed.  |        |
|            | PIO # 8 Suggest that this exciter<br>be designated as a MATROK item<br>to take advantage of 40% pass rate.<br>mention transformer inspection.   |        |
|            | PIO # 9 Suggest that focus<br>study be performed on all exciters<br>as well as many other electrical<br>assembly items now using RTV<br>or potting compound. Explore possibility<br>of using formed rubber housing (prevents<br>arcing, protects from shock, seals, etc.).  |        |



| DATE/PIO # | PIO SUBJECT AND SUPPORTING DATA   | RCC     |
|------------|---|---------|
| 5/16/89    | Interview with Mr. Humphrey on PCN 50217A, ignition exciter.  | MAT PCA |
|            | This item is basically identical to the ignition exciter PCN 61234A. Again an initial function test is required, although troubleshooting before overhaul indicates that 40% of all items tested are fully functional.  |         |
|            | The only real differences existing between the two aforementioned PCNs is that the 50217A has two capacitors in the capacitor #1 Assy. as opposed to one in the 61234A. It should also be noted that instead of RTV being used as an internal insulator and sealer, a hardening compound is poured into the exciter during closeout. This forms a hard plastic cover which is time-consuming to remove. |         |
|            | PIO #10 Suggest use of RTV sealer as in case of 61234A. Much easier to remove.  |         |
|            | PIO #11 Same as suggestion #8.  |         |







| DATE/PIO # | PIO SUBJECT AND SUPPORTING DATA  | RCC     |
|------------|--|---------|
| 05/19/89   | Interview with Wendel Hawkins on PCN# 97133A, Electromag 3-way select valve.   | MAT PCA |
|            | This item is rebuilt each time it enters the depot, and a rebuild kit is required for each item.   |         |
|            | One port of the valve is closed off by the user organization due to this items modified use as an air bleed-off valve. Technical specifications still in effect require that the valve be tested on the fuel transfer equipment located in bld. 3108. This test utilizes the third port normally plugged while in use on aircraft engines, and would appear unnecessary. |         |
|            | It should also be noted that there is no specific requirement to leak test the valve with compressed air before taking the item to the test equipment in 3108. If the item leaks with compressed air being applied, then the test using the fuel transfer station could not be performed.  |         |
|            | PIO # 13 Suggest the test requirement for fuel transfer procedure be deleted from tech. data.  |         |
|            | PIO # 14 Suggest that testing of the valve with compressed air before being sent to fuel transfer station in bld. 3108 (if above PIO not acceptable).  |         |



| DATE/PIO # | PIO SUBJECT AND SUPPORTING DATA   | RCC     |
|------------|---|---------|
| 5/19/89    | Interview with Wendel Hawkins<br>on PCN # 34551A, Solenoid Valve.   | MAT PCA |
|            | <p>This item is 100% overhaul. Operations 115 to 170 of the WCD (CAEZ04) are performed in building 3108 by personnel assigned to the fuel testing facility.</p> <p>A rebuild kit is required for each solenoid valve that is overhauled.</p> <p>Total time for rebuild, including a 12.0 hour mandatory flow time in bld. 3108, 14.6 hours.</p> |         |



| DATE/PIO # | PIO SUBJECT AND SUPPORTING DATA  | RCC    |
|------------|--|--------|
| 5/19/89    | Interview with Richard Franklin about Automatic Ignition Actuator, PCN 35111A.   | MATPCA |
|            | <p>This is a 100% overhaul item. It requires a disassembly and visual inspection as well as electrical testing.</p> <p>Note that there is a requirement to electrically test the actuation switch in the cover &amp; switch assembly. Under present conditions, if the switch tests bad, the entire cover housing must be replaced. The switch is set into the housing with a special potting compound, which must be purchased from BENDIX Corporation. Bendix also manufactures the cover housing. Technicians report that they are unable to obtain the potting compound and must replace the entire housing assembly as a unit. The cost of a new housing assembly is \$800.00, which makes the reluctance of Bendix in providing the potting compound as highly suspect.</p> <p>PIO # 18 suggest that Bendix be encouraged to sell both the potting compound and small switch assy. to user organization. This cover housing assy. should be a repairable item.</p> |        |



| DATE/PIO # | PIO SUBJECT AND SUPPORTING DATA  | RCC    |
|------------|--|--------|
| 5/19/89    | Interview with LARRY Ware<br>on ignition exciter PCN 50297A.   | MATPCA |
|            | This is a MATROC item<br>which requires an initial functional<br>test. Five percent of all items<br>tested fail and must be overhauled.<br>The rest are returned to inventory. |        |
|            | Note that there is a 24.0<br>hour delay at both the machining<br>(MATPCM) and welding (MATPIW)<br>backshop operations.   |        |
|            | This item must be sandblasted<br>and painted after overhauled. A<br>rebuild kit is required for each<br>overhauled item.   |        |
|            | PIO # 15 Humidity control chamber<br>required in MATPCA area. Presently<br>using an old refrigerator packed<br>with desiccant.   |        |





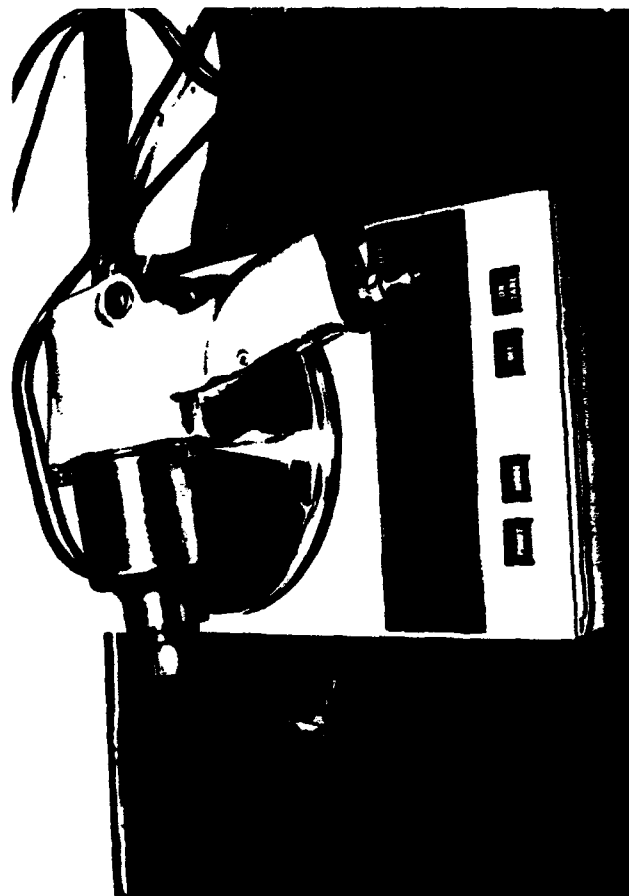


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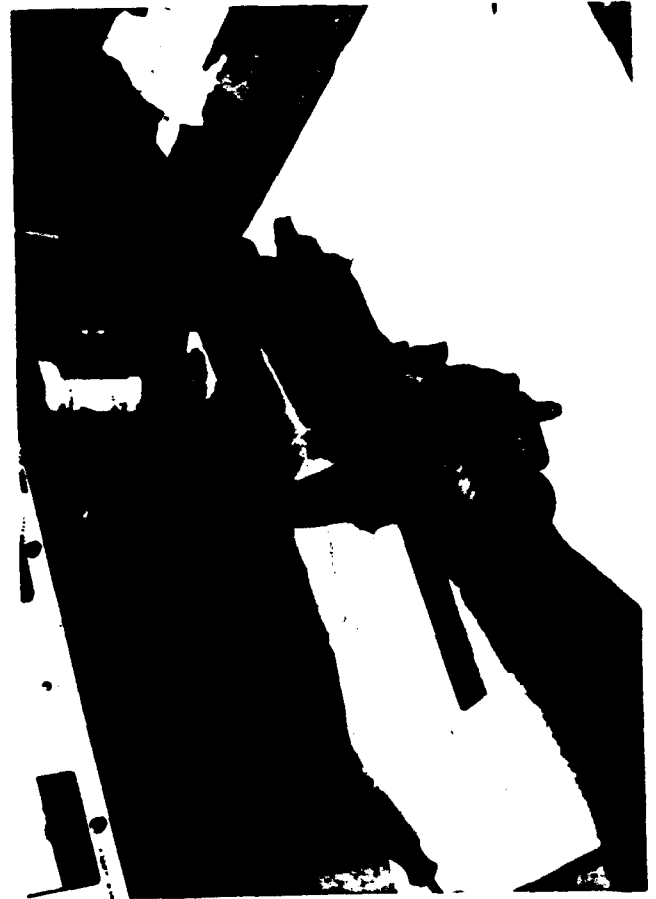


| DATE/PIO # | PIO SUBJECT AND SUPPORTING DATA   | RCC     |
|------------|---|---------|
| 5/25/89    | Interview with Franklin Martin on PCN 34252A, Flowmeter PWR supply.   | MAT PCA |
|            | This PWR Supply is a MATROC designated item. Technicians report that only 5% of the tested items are functional, the rest requiring overhaul.   |         |
|            | Note that the internal circuit board of this item is repairable. The technicians will do this repair in their spare time, when possible, but are not assigned a primary responsibility in this. Again, they are not given a standard time to work these and any repair is therefore left to the initiative of the employee. Cost of replacement: \$200. Cost of repair: unknown at this time. |         |
|            | Note: This item is the same as PCN 34253A in all respects except the housings. All internal components are interchangeable.   |         |
|            | PIO # 19 Suggest a focus study be performed of cost-benefit of repairing the internal circuit boards mentioned above. Should include cost analysis of repair vs. replace, economic order quantity of parts, etc.  |         |

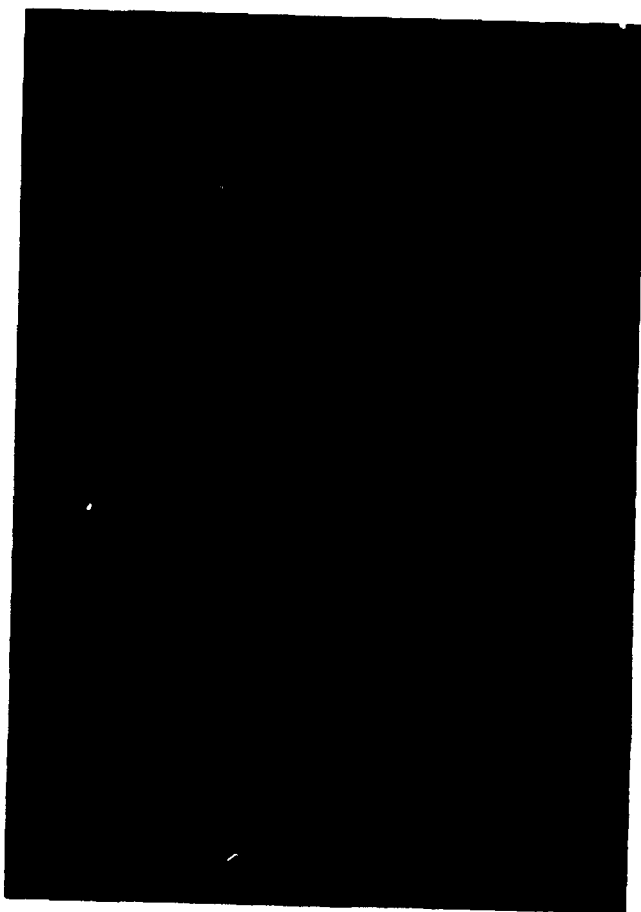














| *****  |     |  |                                 |
|--|-----|--|---------------------------------|
| 1. PART NUMBER   |     | 19. ITEM SERIAL NR   | 10/12. TECH DATA/OPTIONAL       |
| 6039170  |     |  | 2J-1F41-13-7, WP 009 00 0/13/71 |
| 10. MODEL/DESIGN/SERIES  |     | 11. STOCK NR   |                                 |
| 1F41-A1/402D   |     |  |                                 |
| 13. R1001  |     | 14. ROUN/END 1TER NOUN   |                                 |
| CANNON ASSEMBLY  |     | PACI   |                                 |
| 15. DISC 16. PDN   |     |  |                                 |
| 17. WORK TO BE ACCOMPLISHED  |     | 18. TECH DATA  |                                 |
| -> 30056A 2040001/27202CH 1F41-A1<br>-> 61170A 2040001/27202BL 1F41-A2<br>F 2040 00 732 7643UN 1F41-A2 |     |  |                                 |
| W 40   | 010 | RECEIVE, IDENTIFY & ATTACH PAPERWORK   |                                 |
|  | 020 | ALL REFERENCES ARE TO THE BASIC T.O. AND APPLICABLE PROCESS ORDERS. TECH DATA CONTAINS DETAILED NOTES, CAUTIONS, WARNINGS, DIMENSIONS AND TOLERANCES REQUIRING COMPLIANCE. |                                 |
|  | 030 | DISASSEMBLE.   |                                 |
|  | 040 | CLEAN AS REQUIRED.   |                                 |
|  | 050 | INSPECT.   |                                 |
|  | 060 | INSPECT SHUTOFF VALVE DRIVING ARM FOR SPLINE WEAR.   |                                 |
|  |     | ACT _____ INCH   |                                 |
|  | 070 | INSPECT MANUAL FUEL CONTROL DRIVING ARM FOR SPLINE WEAR.   |                                 |
|  |     | ACT _____ INCH   |                                 |
|  | 080 | INSPECT MAIN FUEL CONTROL DRIVING ARM FOR SPLINE WEAR.   |                                 |
|  |     | ACT _____ INCH   |                                 |
|  | 090 | INSPECT DRIVING SHAFT GEAR FOR   |                                 |
|  |     | ACT _____ INCH   |                                 |
|  |     | *SPANNER WRENCH NO 6790371   |                                 |
|  | 100 | INSPECT SHUTOFF VALVE DRIVING GEAR SHAFT, SPLINE WEAR  |                                 |
|  |     | ACT _____ INCH   |                                 |

out of tolerance replace 1. clean & re-assemble



|   |   |                                 |  |
|---|---|---------------------------------|--|
| *****                                       |   |                                 |  |
| CAEZ03 * WORK CONTROL DOCUMENT * 00         |   | 1. DATE 88203 PAGE 2 OF 3 PAGES |  |
| 15. DISC 16. PDN/                           |   |                                 |  |
| STATION/OP NO. 117. WORK TO BE ACCOMPLISHED |   | 18. RECH 19. P 20. M            |  |
| 110   | INSPECT DRIVE SHAFT, SPLINE WEAR  |                                 |  |
|   | ACT _____ INCH  |                                 |  |
| 120   | LUBRICATE AS REQUIRED.  |                                 |  |
| 130   | REASSEMBLE.   |                                 |  |
| 140   | TIGHTEN SPANNER NUT (14)  |                                 |  |
|   | SPANNER WRENCH NO. 6770371  |                                 |  |
|   | ACT _____ IN/LB   |                                 |  |
| 150   | ADJUST STOP UNTIL SHAFT IS IN CONTACT WITH BOTH STOP & CONTROL ARM.   |                                 |  |
|   | ACT _____ INCH  |                                 |  |
| 160   | REMOVE THE INDEXING PIN AND ROTATE CAMBOX LEVER TOWARD INTERMEDIATE. CONTROL UNTIL SWITCH ACTUATES AND LIGHT COMES ON.  |                                 |  |
|   | ACT _____ DEG.  |                                 |  |
|   | ADJUST, SETTING CAMBOX LOCKOUT SWITCH   |                                 |  |
| 160   | HORIZONTALLY ALIGN SWITCH ROLLER TO SURFACE. TIGHTEN THE TWO SWITCH LOCKNUTS & LOCKWIRE TO EACH OTHER.  |                                 |  |
|   | ACT: _____ IN/LB  |                                 |  |
|   | TORQUE WRENCH   |                                 |  |
| 160   | TEST: ROTATE CAMBOX INPUT SHAFT CLOCKWISE UNTIL A 0.1875 TO 0.1880 IN. DIA. RIGGING PIN CAN BE INSERTED THROUGH THE INDEX HOLE MARKED IDLE.                   |                                 |  |
|   | MEASURE THE ANGULAR TRAVEL OF CAMBOX  |                                 |  |
|   | ACT _____ DEG.  |                                 |  |
| 170   | ROTATE CAMBOX INPUT SHAFT CLOCKWISE UNTIL 0.1875 TO .1880 RIGGING PIN CAN BE INSERTED IN HOLE MARKED INT. MEASURE TOTAL ANGULAR TRAVEL OF CAMBOX INPUT LEVER. |                                 |  |
|   | ACT _____ DEG.  |                                 |  |
| 220   | CHECK BACKLASH "B" OF THE CAMBOX HP FUEL SHUTOFF VALVE OUTPUT LEVER AT POINT "C".   |                                 |  |
|   | ACT: _____ INCH   |                                 |  |
| 230   | THE TORQUE REQUIRED TO MOVE THE CAMBOX INPUT FROM THE OFF TO IDLE RANGE   |                                 |  |
|   | ACT: _____ IN/LB  |                                 |  |
| (CONTINUED)                                 |   |                                 |  |



| *****                                  |   | *****                           |  |
|--|---|---------------------------------|--|
| 1. CALZOS * WORK CONTROL DOCUMENT * 30 |   | 1. DATE 00203 PAGE 3 OF 3 PAGES |  |
| 15. DISC 16. PDN/                      |   |                                 |  |
| 17. WORK TO BE ACCOMPLISHED            |   | 18. RECH 17 "P" 100 "Q"         |  |
|  | *TORQUE WRENCH  |                                 |  |
| 260                                    | AFTO FORM 349 COMPLETED & FORWARDED TO DATA AUTOMATION.   | n                               |  |
| 270                                    | SAFETYWIRE.   | n                               |  |
| 280                                    | OPERATIONS COMPLETED & AFTERWORK PROCESSED.   | n                               |  |
| 290                                    | I CERTIFY THAT THIS END ITEM HAS BEEN OVERHAULED IAW T.O. 1-10, CURRENT REVISIONS, SUPPLEMENTS AND APPLICABLE PROCESS ORDERS. | n                               |  |
| 300                                    | COMPLY WITH AAGI 66-30, PARA 10   | n                               |  |
|  | TYPE WORK PERFORMED _____   |                                 |  |







15. DISP 10. PDN/

16. STATION/OP. NO. 17. WORK TO BE ACCOMPLISHED

18. TECH 19. TIME

380 TEST: HERMETIC SEALING AND LEAKAGE.

→  
n

440 PRESSURIZE EXCITER TO 10 PSID WITH  
DRAIR HAVING A Dew Point of  
65 DEG F.

→  
n  
1 min

460 LEAKAGE TEST: INTERNAL EXCITER IN WA  
FOR 100 TO 200 PSI FOR ONE MINUTE.  
NO LEAKAGE ALLOWED.

n

480 ELECTRICAL TESTS

3  
1 min  
5 min

490 APTC 100% GYV CONTROLLED AND FOR-  
WARDED TO DATA ACQUISITION.

n 5 min

500 SAFETY WIRE

n 15 min

510 I CERTIFY THAT THIS END ITEM HAS  
BEEN OVERHAULED IAW T.O., 1010  
CURRENT REVISIONS, SUPPLEMENTS &  
APPLICABLE PREVIOUS ORDERS.

n

520 OPERATIONS VGM, LTED AND LATERWORK  
PROCESSED

n 5 min

530 COMPLY WITH NASC 00 00, PARA 10.

n 1 min

TYPE WORK PERFORMED \_\_\_\_\_



1. CALCOB \* WORK CONTROL DOCUMENT \* 72-10 1. DATE 89040 PAGE 1 OF 3 PAGES  
 2. ORIGIN/PROD NR 13. QUANTITY 14. PROD SECTION/RCC 15. DATE SCHED 16. DATE COMP  
 34044A MTPCAB 89074

7. AKI NUMBER 19. ITEM SERIAL NR 10/12. TECH DATA/OPTIONAL +98093  
 41469/42590 (M) 1 PU MAT87-16  
 10. MODEL/DESIGN/SERIES 11. STOCK NR 8E1 8 8-3 8/7/4H  
 1P35 P7 2925009862055RV CHG 21  
 13. MISC 14. NOON/END ITEM NOON 8E1 8 8-3-1 8000 H  
 15. NOON/END ITEM NOON CHG 3  
 16. NOON/END ITEM NOON PACI  
 17. NOON/END ITEM NOON JOHN GRISLER  
 18. NOON/END ITEM NOON

17. WORK TO BE ACCOMPLISHED

| 20% TOTAL TEAR DOWN |     |  |   |               |
|---------------------|-----|--|---|---------------|
| W-43                | 010 | RECEIVE, IDENTIFY & ATTACH PAPERWORK   | M |               |
|                     | 015 | ALL REFERENCES ARE TO THE BASIC T.O. AND APPLICABLE PROCESS ORDERS. TECH DATA CONTAINS DETAILED NOTES, CAUTIONS, WARNINGS, DIMENSIONS AND TOLERANCES REQUIRING COMPLIANCE. | M |               |
|                     | 020 | DISASSEMBLE.   | M | 120           |
|                     | 030 | CLEAN AS REQUIRED.   | M | 6             |
|                     | 040 | INSPECT. (VISUAL)  | M | 6             |
|                     | 060 | TEST CAPACITORS IAW T.O. FLASH 20' METER 40' (REPLACE EPOXY UNDER) 2 CAP   | M | 12 4929 35% R |
|                     | 070 | TEST FILTER IAW T.O. TEST STAND  | M | 6 15% R       |
|                     | 080 | TEST INDUCTORS (2) 1 FILTER 3 MIN 10% REPL (4) ICA   | M | 6 5% R        |
|                     | 090 | TEST DISCHARGER TUBE #24498 AND 24222 IAW T.O. (3) ICA (TEST ST 20')   | M | 12 60% R      |
|                     | 100 | TEST FEED-THROUGH TERMINAL IAW T.O. (1) ICA TEST STAND   | M | 6 5% R        |
|                     | 110 | TEST PWR TRANSF. IAW T.O.  | M | 6 5% R        |
|                     | 120 | TEST VIBRATOR IAW T.O.   | M | 6 100% R      |
|                     | 380 | REPAIR OR REPLACE AS NECESSARY.  | M | 42 DEC NR     |



|                |  |              |            |                      |
|----------------|--|--------------|------------|----------------------|
| 390            | REASSEMBLE. <i>E TORQUE</i><br><i>As Req'd</i>   | m            | 180<br>3.0 |                      |
| <del>440</del> | <del>TORQUE ALL INSIDE SCREWS &amp; NUTS AND<br/>CAP (13) IAW T.O.</del>   | <del>m</del> |            |                      |
| 460            | INTERMEDIATE TEST: APPLY 14 V FOR 10<br>SECONDS MAX. OBTAIN 3100 3400V.<br>ACT: _____ V<br>INPUT VOLTAGE 14 24 29<br>SPARKS OVER 10-SEC 5.0 5.0 5.0<br>PERIOD (MINIMUM)<br>ACTUAL _____<br>AMPS (MAXIMUM) 5.0 5.0 5.0<br><br>ACTUAL _____<br>CONTINUOUS DUTY CIRCUIT TEST: OBTAIN<br>ACL CAPACITOR VOLTAGE<br>ACTUAL _____ VOLTS<br>INPUT CURRENT<br><br>ACTUAL _____ AMP<br><br>SPARK RATE, LEFT HAND OUTPUT, 10-20<br>SPARKS IN 10 SECONDS.<br>TRIGGERING CIRCUITS TEST: APPLY 24<br>VDC FOR 10 SECONDS. CONSISTENT<br>SPARKING MUST BE OBSERVED IN WINDOWS<br>OF BOTH TESTER.<br>INSERT SHORTING CAP TO ONE TESTER AT<br>A TIME. MUST WORK CORRECTLY.<br>TESTER #1: CAP 0.200, 25 PSIG.<br>TESTER #2: CAP 0.100, 5 PSIG.<br>OBTAIN GAP 0.200 INCH, 20 PSIG. "C"<br>PIN 115 V 400 CYCLE. CONSISTENT<br>SPARKING. | m            | X<br>9     | TEST SPAN<br>OC 4929 |
| 520            | FILL WITH POTTING COMPOUND<br>AND BAKE IAW T.O.  | m            | 6          |                      |
| 525            | TORQUE ALL SCREWS OR NUTS OUTSIDE OF<br>CASE. IAW T.O. ( <i>SOLDER SEAL CASE</i> )   | m            | 18         |                      |
| 530            | TEST FOR LEAKS: APPLY 15 PSIG. LEAK-<br>AGE 1 X 10 -6 CUBIC CENTIMETERS PER<br>SECOND MAXIMUM. (ALT LEAK CHECK IN<br>WATER)<br><br>ACTUAL _____  | m            | 6          | OC<br>3952           |
| 540            | PRESSURE GAS CHARGE EXCITER.<br><i>30 FLOW OVEN</i>  | m            | 6          | 24<br>OC             |
| 560            | PAINT<br><i>240 FLOW</i>   | m            | 18         | ?                    |
| 570            | FINAL TESTING<br>OUTPUT ENERGY LEVEL AND SPARK<br>(CONTINUED)  | m            | 9          | OC 4929<br>(SRE 460) |



RATE OF INTERMITTENT DUTY CIRCUIT.  
 APPLY 24 V INPUT CURRENT 5.0 AMPS  
 MAXIMUM.  
 STORED ENERGY  
 ACTUAL \_\_\_\_\_ METER READING  
 SPARK RATE  
 ACTUAL \_\_\_\_\_  
 OUTPUT ENERGY LEVEL OF CONTINUOUS  
 DUTY CIRCUIT. APPLY 115 V 400 CYCLE  
 INPUT CURRENT 2.5 AMPS RMS.  
 STORED ENERGY  
 ACTUAL \_\_\_\_\_ METER READING  
 SPARK RATE  
 ACTUAL \_\_\_\_\_  
 TRIGGERING CIRCUITS IN INTERMITTENT  
 DUTY CIRCUIT CAP 0.100 IN & 5 PSIG.  
 APPLY 24 VDC FOR 10 SEC MINIMUM.  
 CONSISTENT SPARKING.  
 INSERT SHORTING CAP TO EACH OUTPUT  
 TERMINAL IN TURN. MUST FIRE  
 CONSISTENTLY.  
 TESTER #1: CAP 0.200, 25 PSIG  
 TESTER #2: CAP 0.100, 5 PSIG.  
 MUST FIRE CONSISTENTLY.  
 REVERSE AND TEST.  
 OBTAIN CAP 0.200 INCH, 20 PSIG.  
 APPLY PIN "C" 115 V 400 CYCLE.  
 OBSERVE CONSISTENT SPARKING.

650 SAFETY WIRE

M 3

660 I CERTIFY THAT THIS END ITEM HAS  
 BEEN OVERHAULED IAW T.O., T.O.D.,  
 CURRENT REVISIONS, SUPPLEMENTS &  
 APPLICABLE PROCESS ORDERS.

M 3

670 OPERATIONS COMPLETED & PAPERWORK  
 PROCESSED. AUTO FORM 349 COMPLETED  
 & FORWARDED TO DATA AUTOMATION.

M 6

680 COMPLY WITH MAOI 66-36 PARA 13

M 3

TYPE WORK PERFORMED \_\_\_\_\_

12 HRS

LEAK TEST  
BRUCH

ENDERSON



(CONTINUED)







| *****  |                             | *****   |                                   |
|--|-----------------------------|---|-----------------------------------|
| 1. CAAC02 * WORK CONTROL DOCUMENT * JC   |                             | 1. DATE 8Y010 PAGE 1 OF 1 PAGES   |                                   |
| *****  |                             | *****   |                                   |
| 12. ORIG/PROD NR   | 13. QUANTITY                | 14. PROD SECTION/RCC  | 15. DATE SCHED                    |
| 34252A   |                             | ATPCA   | 8Y13Y                             |
| *****  |                             | *****   |                                   |
| 17. PART NUMBER  | 19. ITEM SERIAL NR          | 18/12. TECH DATA/OPTIONAL   |                                   |
| 8TJ51GAA4  |                             | SL14-2-7-13 342/4H  |                                   |
| *****  |                             | CHG 13  |                                   |
| 10. MODEL/DESIGN/SERIES  | 11. STOCK NR                | MAY 22, 1989  |                                   |
| B52  | 6130007728566N7             | THH. MARLIN (HAW-KLEIN,   |                                   |
| *****  |                             | * THIS IS THE SAME EQUIPMENT  |                                   |
| 13. MISC   | 14. NOON/END ITEM NOON      | THICKER 122 - DCN # 34253A.   |                                   |
|  | FLOWMETER PWR SUPPLY        | PACI  |                                   |
| *****  |                             | *****   |                                   |
| 15. DISP-16. PDN/  | 17. WORK TO BE ACCOMPLISHED |   |                                   |
| STATION/OF NO.   | 18. MECH 19" F 120" W       |   |                                   |
| ALL REFERENCES ARE TO THE BASIC T.O. AND APPLICABLE PROCESS ORDERS. TECH DATA CONTAINS DETAILED NOTES, CAUTIONS, WARNINGS, DIMENSIONS AND TOLERANCES REQUIRING COMPLIANCE. |                             |   |                                   |
| W-41   | 010                         | RECEIVE, IDENTIFY & ATTACH PAPERWORK  | n                                 |
|  | 050                         | DISASSEMBLE   | n                                 |
|  | 060                         | CLEAN   | n                                 |
|  | 070                         | INSPECT   | n                                 |
|  | 100                         | LUBRICATE AS REQUIRED   | n                                 |
|  | 110                         | REASSEMBLE  | n                                 |
|  | 115                         | TEST.   | n                                 |
|  | 120                         | COMPLY WITH MAUI 66-36, PARA 13   | n                                 |
|  |                             | TYPE WORK PERFORMED   | OVERHAULED                        |
|  | 170                         | I CERTIFY THAT THIS END ITEM HAS BEEN OVERHAULED IAW T.O., WITH CURRENT REVISIONS, SUPPLEMENTS & APPLICABLE PROCESS ORDERS. | THIS MECHANICAL STAND WORK-SHEET. |
|  |                             |   | ITEM 4.027                        |
|  | 180                         | OPERATIONS COMPLETE AND PAPERWORK PROCESSED.  | n                                 |







|     |  |   |
|-----|--|---|
| 060 | REASSEMBLE.  | M |
| 080 | COMPLY WITH MAOI 66 33, PARA 13.   | M |
|     | TYPE WORK PERFORMED  |   |
| 090 | I CERTIFY THAT THIS END ITEM HAS BEEN OVERHAULED IAW T.O., 1070, CURRENT REVISIONS, SUPPLEMENTS & APPLICABLE PROCESS ORDERS. | M |
| 100 | OPERATIONS COMPLETE AND ITEM HAS BEEN PROCESSED.   | M |

\*\*\*\*\*  
 1. ORIGINATOR'S WORK CONTROL DOCUMENT \* 30 1. DATE 07010 PAGE 1 OF 1 PAGE 01  
 \*\*\*\*\*

12. ORIGINATOR NR 13. QUANTITY 14. PROC SECTION/REC 15. DATE SHED 16. DATE COMPI  
 34253A 1 NIPCA 1 07134 1

17. PART NUMBER 19. ITEM SERIAL NR 18/12. TECH DATA/OPTIONAL  
 01J51GAA5 1 5114 2 7-13 042/4H  
 1 CHG 13

10. MODEL/DESIGN/SERIALS 11. STOCK NR  
 332 1 613000772856/NFI

13. RECD 14. NOON/END ITEM NOON  
 1 FULL FLOWMETER PWR SUPPLY PADI  
 -YLRN7/MATEAA/65920

15. DISC 16. PDR/-  
 10. IDENTIF NO. 117. WORK TO BE ACCOMPLISHED 118. TECH 119. 120. M

ALL REFERENCES ARE TO THE BASIC T.O.  
 AND APPLICABLE PROCESS ORDERS. TECH  
 DATA CONTAINS DETAILED NOTES,  
 CAUTIONS, WARNINGS, DIMENSIONS AND  
 TOLERANCES REQUIRING COMPLIANCE.

|      |     |                                      |   |
|------|-----|--------------------------------------|---|
| W-41 | 010 | RECEIVE, IDENTIFY & ATTACH PAPERWORK | M |
|      | 020 | DISASSEMBLE.                         | M |
|      | 030 | CLEAN.                               | M |
|      | 040 | INSPECT.                             | M |
|      | 050 | LUBRICATE AS REQUIRED.               | M |
|      | 060 | REASSEMBLE.                          | M |



\*\*\*\*\*  
 12. ORG/PROD NR 13. QUANTITY 14. PROD SECTION/RCC 15. DATE SCHED 16. DATE COMP  
 34551A 1 MTECAP 1 89055 1

7. ART NUMBER 19. ITEM SERIAL NR 16/12. TICH DATA/OPTIONAL  
 1 PO DAT07-3

10. MODEL/DESIGN/SERIES 11. STOCK NR 862440  
 1141 A1/A2 1 CHG 3

13. MISC 14. NOUN/END ITEM NOUN  
 1 SOLENOID VALVE 1 PACI

MULTI RUM/MATLAC/35420  
 P/N NGN C/N  
 6067277 291500177697700N 34397A  
 6067277 291500177697700E 61177A  
 6067235 4610001114113CN 34551A

15. DISH-16. PUR/ 17. WORK TO BE ACCOMPLISHED 110. RECH 17. "P" 120. "W"

010 RECEIVE, IDENTIFY AND ATTACH  
 PAPERWORK. 1

015 ALL REFERENCES ARE TO THE BASIC I.D.  
 & APPLICABLE PROCESS ORDERS. TECH  
 DATA CONTAINS DETAILED NOTES,  
 CAUTIONS, WARNINGS, DIMENSIONS &  
 TOLERANCES REQUIRING COMPLIANCE. 1

020 DISASSEMBLE. 1

030 CLEAN. 1

040 INSPECT. 1

050 APPLY 90 VDC FOR 5 SECONDS  
 BETWEEN EACH PIN AND BODY. 1

ACT: 1

060 CHECK CONTINUITY PINS (1-2)  
 AND (3-4). 1

PINS (1-2) ACT: 0003

PINS (3-4) ACT: 0003

080 CHECK AIR GAP IAW I.D. 1

ACT: 1



| *****           |  |          |                                 |
|-----------------|--|----------|---------------------------------|
| CAEZ04          | WORK CONTROL DOCUMENT  | JO       | 1. DATE 00131 PAGE 2 OF 2 PAGES |
| 15.DIST-16.FUN/ |  |          |                                 |
| STATION/OP NO.  | 17. WORK TO BE ACCOMPLISHED  | 18. MECH | 19 "P" 20 "M"                   |
|                 | 090 REPAIR OR REPLACE AS NECESSARY.  | M        |                                 |
|                 | 100 REASSEMBLE.  | M        |                                 |
|                 | 110 TORQUE SCREWS (12).  | M        |                                 |
|                 | ACT: LB IN   |          |                                 |
|                 | TORQUE WRENCH  |          |                                 |
| 3105            | 115 PERFORM LOW PRESSURE FLOW LEAKAGE TEST AT 330 PSIG. NO LEAKAGE ALLOWED OVER A PERIOD OF 2 MINUTES. TEST SET.                 | M        |                                 |
| ?               |  |          |                                 |
| Routing Symbol  | 130 PERFORM VALVE LEAKAGE TEST AT 1900 PSIG FOR 2 MINUTES. NO LEAKAGE ALLOWED. TEST STAND?                                       | M        |                                 |
|                 | 140 CALIBRATION: CHECK FLOW THROUGH VALVE.   | M        |                                 |
|                 | ACT: LB/HR   |          |                                 |
|                 | 150 CHECK LEAKAGE FROM OUTLET CONNECTION.  | M        |                                 |
|                 | ACT: CU/MIN  |          |                                 |
|                 | 160 APPLY 1930 PSIG INLET PRESSURE. NO LEAKAGE EXCEPT FROM OUTLET CONNECTION.  | M        |                                 |
|                 | 170 APPLY 130 PSIG. NO LEAKAGE ALLOWED OVER 2 MINUTE PERIOD.   | M        |                                 |
| W-43            | 175 PAINT REQ NOT REQ Del  | M        |                                 |
|                 | 178 ELECTRICAL CHECK APPLY 500 VDC 3 SECONDS BETWEEN EACH PIN AND BODY. ACT: GIGAHMS.  | M        |                                 |
|                 | 180 AF10 FORM 349 COMPLETED AND FORWARDED TO DATA AUTOMATION.  | M        |                                 |
|                 | 235 I CERTIFY THAT THIS END ITEM HAS BEEN OVERHAULED IAW T.O., 1010, CURRENT REVISIONS, SUPPLEMENTS & APPLICABLE PROCESS ORDERS. | M        | 5 min                           |
|                 | 240 OPERATIONS COMPLETE AND PAPER WORK PROCESSED.  | M        |                                 |
|                 | 255 COMPLY WITH NAUI 66-36, PARA 13 TYPE WORK PERFORMED  | M        |                                 |

done in 3105



| *****                   |     |  |                           |
|-------------------------|-----|--|---------------------------|
| 1. PART NUMBER          |     | 19. ITEM SERIAL NR   | 18/12. TECH DATA/OPTIONAL |
| 42127 (M)               |     | 1  | PD MAT38-3                |
| 10. MODEL/DESIGN/SERIES |     | 11. STOCK NR   | 8/200H                    |
| 1F30 P103,107,1         |     | 2925009413/08P01   |                           |
| 13. MISC                |     | 14. NOUN/END ITEM NOUN   |                           |
| 1                       |     | IGNITION EXCITER   |                           |
| 15. DISP-16. PDR/       |     | 17. WORK TO BE ACCOMPLISHED  | 18. MICH 19" P 120" W     |
| STATION/UP NO.          |     |  |                           |
| W 41                    | 010 | RECEIVE, IDENTIFY & ATCH PAPERWORK.  | M                         |
|                         | 015 | ALL REFERENCES ARE TO THE BASIC P.D. & APPLICABLE PROCESS ORDERS. TECH DATA CONTAINS DETAILED NOTES, CAUTIONS, WARNINGS, DIMENSIONS & TOLERANCES REQUIRING COMPLIANCE. | M                         |
|                         | 020 | PRELIMINARY CHECK: MEASURE RESISTANCE BETWEEN OUTPUT TERMINAL AND GROUND<br>XVIVTX ACT: _____ OLDS.  | M                         |
|                         | 030 | TEST: OUTPUT ENERGY LEVEL & SPARK RATE:<br>ACT: _____  | M                         |
|                         | 040 | APPLY 21.0 VOLTS/RMS. OBTAIN 1.0 SPARKS PER SECOND MINIMUM.  | M                         |
|                         | 050 | TEST TRIGGERING CIRCUIT: ADJUST FOR CAP & INTERNAL PRESSURE.<br>ACT _____ INCH ACT _____ PSIG<br>APPLY 21.0 VOLTS/RMS 400 CYCLE.<br>OBTAIN CONSISTANT SPARKING.        | M                         |
|                         | 060 | PRESSURE TEST: SUBMERGE IN WATER 180 DEG F MIN FOR 1 MINUTE. NO LEAKS  | M                         |
|                         | 070 | DISASSEMBLE.   | M                         |

COMPOUND

SIX MIN OP B

JOHN



|             |                       |   |                                 |
|-------------|-----------------------|---|---------------------------------|
| *****       |                       |   |                                 |
| CAEY10      | WORK CONTROL DOCUMENT | 00  | 1. DATE 98367 PAGE 2 OF 5 PAGES |
| 13. DISP    | 16. PDN/              |   |                                 |
| STATION     | UP NO.                | 117. WORK TO BE ACCOMPLISHED  | 118. MECH 119 "P" 120 "Q"       |
|             | 080                   | REMOVE COVERS.  | M                               |
|             | 090                   | CLEAN AS REQUIRED.  | M                               |
|             | 100                   | INSPECT.  | M                               |
| 0-30        | 110                   | WELD INPUT & OUTPUT TERMINALS   | M                               |
|             | 110                   | REQ: _____ NOT REQ: _____   |                                 |
|             | 130                   | FLASH TEST CAPACITOR: IAW T.O.  | M                               |
|             |                       |   |                                 |
|             |                       | "C" TO "D" & CASE ACT: _____ SEC  |                                 |
|             |                       | ACT: _____ MA.  |                                 |
|             |                       | "A" & "B" ACT: _____ SEC  |                                 |
|             |                       | ACT: _____ MA.  |                                 |
|             |                       | "A" "B" & CASE ACT: _____ SEC   |                                 |
|             |                       | ACT: _____ MA.  |                                 |
|             | 140                   | CHECK CAPACITANCE:  | M                               |
|             |                       | "A" TO "B"  |                                 |
|             |                       | ACT: _____ UF   |                                 |
|             |                       | "B" TO "C"  |                                 |
|             |                       | ACT: _____ UF   |                                 |
|             |                       | "C" TO CASE -   |                                 |
|             |                       | ACT: _____ UF   |                                 |
|             |                       | "D" TO CASE -   |                                 |
|             |                       | ACT: _____ UF   |                                 |
|             |                       | "B" TO CASE -   |                                 |
|             |                       | ACT: _____ UF   |                                 |
|             |                       | *CAPACITOR BRIDGE TESTER*   |                                 |
|             | 150                   | FILTER TEST: IAW T.O.   | M                               |
|             |                       | ACT: _____ OHM  |                                 |
|             | 160                   | APPLY 500 VOLTS DC BETWEEN PINS OF<br>INPUT RECEPTACLE FOR ONE MINUTE MIN | M                               |
| (CONTINUED) |                       |   |                                 |



|   |  |   |   |  |  |
|---|--|---|---|--|--|
| *****   |  |   |   |  |  |
| CACT10 * WORK CONTROL DOCUMENT * JC 1. DATE 88307 PAGE 3 OF 5 PAGES   |  |   |   |  |  |
| 15. DIST-16. PDN/   |  |   |   |  |  |
| STATION/UP NO. 117. WORK TO BE ACCOMPLISHED 118. MECH 119 "P" 120 "Q" |  |   |   |  |  |
|   |  | IMUM. NO BREAKDOWN ALLOWED.   |   |  |  |
| 170   |  | CHECK LEAKAGE BETWEEN "B" & GROUND FOR ONE MINUTE.                                | M |  |  |
|   |  | *VTVM* ACT: _____ MEGOHMS.  |   |  |  |
| 180   |  | MEASURE RESISTORS (?)   | M |  |  |
|   |  | NO. 1 ACT: _____ OHMS   |   |  |  |
|   |  | NO. 2. ACT: _____ OHMS  |   |  |  |
|   |  | *VTVM*  |   |  |  |
| 190   |  | RECTIFIER TUBE TEST: APPLY 3000 VOLT INVERSE CURRENT AFTER APPROX 30 SEC. OBTAIN. | M |  |  |
|   |  | #1 ACT: _____ SEC   |   |  |  |
|   |  | ACT: _____ MA   |   |  |  |
|   |  | #2 ACT: _____ SEC   |   |  |  |
|   |  | ACT: _____ MA   |   |  |  |
|   |  | #3 ACT: _____ SEC   |   |  |  |
|   |  | ACT: _____ MA   |   |  |  |
|   |  | #4 ACT: _____ SEC   |   |  |  |
|   |  | ACT: _____ MA   |   |  |  |
|   |  | *TEST CONSOLE*  |   |  |  |
| 200   |  | OBTAIN 10 MILLIAMPERES FLOW. VOLTAGE DROP.  | M |  |  |
|   |  | #1 ACT: _____ VOLTS   |   |  |  |
|   |  | #2 ACT: _____ VOLTS   |   |  |  |
|   |  | #3 ACT: _____ VOLTS   |   |  |  |
|   |  | #4 ACT: _____ VOLTS   |   |  |  |
| 210   |  | ESS POSITION - OBTAIN BREAKDOWN. STABILIZED STRIKING VOLTAGE                      | M |  |  |
|   |  | #1 ACT: _____ VOLTS   |   |  |  |

(CONTINUED)



|   |     |                                       |            |           |                                 |  |  |  |  |
|---|-----|---------------------------------------|------------|-----------|---------------------------------|--|--|--|--|
| *****                                       |     |                                       |            |           |                                 |  |  |  |  |
| CALY10 - WORK CONTROL DOCUMENT * JC         |     |                                       |            |           | 1. DATE 88307 PAGE 4 OF 5 PAGES |  |  |  |  |
| 15. DISP-16. PDN/                           |     |                                       |            |           |                                 |  |  |  |  |
| STATION/OP NO. 117. WORK TO BE ACCOMPLISHED |     |                                       |            |           | 118. MECH 119 "P" 120 "B"       |  |  |  |  |
|   |     | #2                                    | ACT: _____ | VOLTS     |                                 |  |  |  |  |
|   |     | #3                                    | ACT: _____ | VOLTS     |                                 |  |  |  |  |
|   |     | #4                                    | ACT: _____ | VOLTS     |                                 |  |  |  |  |
|   | 220 | DISCHARGER TUBE TEST: 1AW T.O.        |            |           | M                               |  |  |  |  |
|   |     | ACT: _____                            |            |           |                                 |  |  |  |  |
|   |     | *TEST CONSOLE, VOLTSCOPE,             |            |           |                                 |  |  |  |  |
|   |     | DISCHARGER TUBE TESTER*               |            |           |                                 |  |  |  |  |
|   | 230 | HIGH TENSION INSULATOR TEST: 1AW T.O. |            |           | M                               |  |  |  |  |
|   | 240 | POWER TRANSFORMER TEST: 1AW T.O.      |            |           | M                               |  |  |  |  |
|   | 250 | MEASURE RESISTANCE BETWEEN TWO SEC-   |            |           | M                               |  |  |  |  |
|   |     | ONDARY LEADS.                         |            |           |                                 |  |  |  |  |
|   |     | ACT _____                             | OHMS       | ACT _____ | OHMS                            |  |  |  |  |
|   | 260 | APPLY 1.5 VOLTS BETWEEN PRIMARY IN-   |            |           | M                               |  |  |  |  |
|   |     | PUT LEAD & GROUND. EXCITER CURRENT    |            |           |                                 |  |  |  |  |
|   |     | ACT: _____                            |            |           | AMP                             |  |  |  |  |
|   | 270 | CHECK VOLTSCOPE WAVEFORM FOR "HASH"   |            |           | M                               |  |  |  |  |
|   |     | AT 2500 VOLTS PEAK ON SECONDARY.      |            |           |                                 |  |  |  |  |
|   | 280 | HIGH TENSION TRANSFORMER TEST:        |            |           | M                               |  |  |  |  |
|   |     | CHECK CONTINUITY.                     |            |           |                                 |  |  |  |  |
|   | 290 | ADJUST GAP & AN INTERNAL PRESS.       |            |           | M                               |  |  |  |  |
|   |     | ACT: _____                            |            |           | INCH                            |  |  |  |  |
|   |     | ACT: _____                            |            |           | PSIG                            |  |  |  |  |
|   |     | ACT: _____                            |            |           | VOLTS                           |  |  |  |  |
|   | 300 | REPAIR OR REPLACE AS NECESSARY.       |            |           | M                               |  |  |  |  |
|   | 310 | REMOVE REEL.                          |            |           | M                               |  |  |  |  |
|   | 320 | INTERMEDIATE TEST ON OPEN EXCITER:    |            |           | M                               |  |  |  |  |
|   |     | APPLY INPUT VOLTAGE OF 21.0 VOLTS     |            |           |                                 |  |  |  |  |
|   |     | (RMS).                                |            |           |                                 |  |  |  |  |
|   |     | OBTAIN 1.0 SPARKS PER SECOND MINIMUM  |            |           |                                 |  |  |  |  |
|   |     | ACT: _____                            |            |           |                                 |  |  |  |  |

(CONTINUED)



CAEY10 \* WORK CONTROL DOCUMENT \* JC 1. DATE 88307 PAGE 5 OF 5 PAGES  
 15. DISC 16. PDN/  
 STATION/OP NO. 117. WORK TO BE ACCOMPLISHED 118. MECH 119. P 120. Q

|      |             |   |   |  |  |
|------|-------------|---|---|--|--|
|      |             | OBTAIN INPUT CURRENT  |   |  |  |
|      |             | ACT: _____ AMPS   |   |  |  |
|      |             | OBTAIN STORAGE CAPACITOR VOLTAGE  |   |  |  |
|      |             | ACT: _____ VOLTS  |   |  |  |
|      |             | OUTPUT TESTER EXCITER TESTER<br>VOLTSCOPEX  |   |  |  |
|      | 330         | TEST TRIGGERING CIRCUIT: IAW T.O.   | m |  |  |
| 0-35 | 340<br>MPLW | WELD COVERS IAW T.O.  | m |  |  |
| 0-35 | 350<br>MPLW | PRESSURE TEST: IAW T.O.   | m |  |  |
|      | 360         | GAS CHARGING: BAKE EXCITER 30 MIN<br>UTES. FILL DRY NITROGEN 10 POUND<br>GAUGE. SOLDER TUBE.  | m |  |  |
|      | 380         | BAKE 400 DEG. F. FOR 25 MINUTES.  | m |  |  |
|      | 390         | TEST EXCITER: IAW T.O.  | m |  |  |
|      |             | ACT: _____ AMP  |   |  |  |
|      |             | OBTAIN STORED ENERGY  |   |  |  |
|      |             | ACT: _____ METER READING  |   |  |  |
|      | 400         | APPLY 21.0 VOLTS (RMS). OBTAIN 1.0<br>SPARKS PER SECOND MINIMUM.  | m |  |  |
|      |             | ACT: _____  |   |  |  |
|      | 410         | TRIGGERING CIRCUIT TEST: IAW T.O.   | m |  |  |
|      | 420         | AFTO FORM 349 COMPLETED & FORWARDED<br>TO DATA AUTOMATION.  | m |  |  |
|      | 460         | I CERTIFY THAT THIS END ITEM HAS<br>BEEN OVERHAULED IAW T.O., TOTO,<br>CURRENT REVISIONS, SUPPLEMENTS AND<br>APPLICABLE PROCESS ORDERS. | m |  |  |
|      | 470         | OPERATIONS COMPLETED & PAPERWORK<br>PROCESSED.  | m |  |  |
|      | 475         | COMPLY WITH MAUI 66-36, PARA 13   | m |  |  |
|      |             | TYPE WORK PERFORMED _____   |   |  |  |



CAEY11 \* WORK CONTROL DOCUMENT \* JC 1. DATE 38307 PAGE 1 OF 2 PAGES

2. ORIGIN/PROD NR 13. QUANTITY 14. PROD SECTION/REC 15. DATE SHED 16. DATE CORR  
35033A 1 MTPCA 1 89093

17. PART NUMBER 19. ITEM SERIAL NR 18/12. TECH DATA/OPTIONAL  
0125154 (M) 1 1 PD MAF33-3

10. MODEL/DESIGN/SERIES 11. STOCK NR 1 CHO 5  
11 40 103 107-10 1 6680001102880PM

12. DISC 14. MOUNT/END ITEM NUM 1  
1 LIMITED LEVEL SENSOR PACI

13. DISC 14. MOUNT/END ITEM NUM 1

15. DISC 16. PDN/ 117. WORK TO BE ACCOMPLISHED 118. FLUOR 19" 120" 6"

1 F 6680 00 94V 8772F0  
MTPCA  
35033A  
350330

010 RECEIVE, IDENTIFY & ATTACH PAPERWORK

015 ALL REFERENCES ARE TO THE BASIC I.O.  
& APPLICABLE PROCESS ORDERS. TECH  
DATA CONTAINS DETAILED NOTES,  
CAUTIONS, WARNINGS, DIMENSIONS &  
TOLERANCES REQUIRING COMPLIANCE.

020 DISASSEMBLE AS REQUIRED.

030 CLEAN AS REQUIRED.

040 INSPECT.

050 MEASURE INSULATION RESISTANCE BE-  
TWEEN ALL FEED THRU LEADS AND CASE  
GROUND

#1 ACT: MECHINS

#2 ACT: MECHINS

#3 ACT: MECHINS

#4 ACT: MECHINS

#5 ACT: MECHINS

#6 ACT: MECHINS

\*MULTIMETER

070 REPAIR OR REPLACE AS NECESSARY.  
(REPAIR IS LIMITED TO FOUR ITEMS AS  
PER I.O.)

080 REASSEMBLE.

090 SAFETY WIRE OR SEALING COMPOUND THAT  
CONFORMS TO MIL-S-22473D WILL BE  
USED TO SECURE TERMINAL BLOCK SCREWS  
(5).



115. DISC 16.10N/

STATION/UP NO. 117. WORK TO BE ACCOMPLISHED

113. RECHIL/20"20"20"

|     |   |     |
|-----|---|-----|
| 110 | CONTINUITY AND RESISTANCE CHECK:  |     |
|     | 4 TO 2  | ACT |
|     | 6 TO 2  | ACT |
|     | DIFFERENCE  | ACT |
|     | 4 TO 5  | ACT |
|     | 6 TO 5  | ACT |
|     | DIFFERENCE  | ACT |
|     | 4 TO 1  | ACT |
|     | 6 TO 1  | ACT |
|     | DIFFERENCE  | ACT |
|     | 4 TO 3  | ACT |
|     | 6 TO 3  | ACT |
|     | DIFFERENCE  | ACT |
| 120 | ALTO TURN 245 COMPLETED & FORWARDED<br>TO DATA AUTOMATION.  |     |
| 130 | CERTIFY THAT THIS END ITEM HAS<br>BEEN UNHAULLED 1AM T.O., 1000<br>CURRENT REVISIONS, SUPPLEMENTS &<br>APPLICABLE FREIGHT ORDERS. |     |
| 140 | OPERATIONS COMPLETED & FOLLOWUP<br>PROCESSED  |     |
| 150 | COMPLY WITH PAGE 03-03, PARA 13<br>TYPE WORK PERFORMED  |     |



| 1. CAEZ08 WORK CONTROL DOCUMENT 2 JC   |  | 1. DATE 80222 PAGE 1 OF 4 PAGES     |  |
|--|--|-------------------------------------|--|
| 12. ORIO/PROD NR 13. QUANTITY 14. PROD SECTION/REC 15. DATE SHED 16. DATE COMP |  |                                     |  |
| 1. PART NUMBER   |  | 19. ITEM SERIAL NR                  |  |
| 10. MODEL/DESIGN/SERIES 11. STOCK NR   |  | 18/12. TECH DATA/OPTIONAL           |  |
| 13. MISC 14. NOUN/END ITEM NOUN  |  | 1. OF 1-2-39-3                      |  |
| 1. AUTOMATIC POSITION ACTUATOR   |  | 1. CHS 5                            |  |
| 1. UNITERUN/MATEAC/65920   |  | 04125H                              |  |
| 1. P/N   |  | NSN                                 |  |
| 1. 0462139   |  | 292500008548500 412296              |  |
| 1. (10-332470-3)   |  |                                     |  |
| 1. 0462139   |  | 292500008548500 <u>351116</u>       |  |
| 1. (10-332470-3)   |  |                                     |  |
| 1. DISP 16. FOR  |  |                                     |  |
| 1. STATION/ID NR   |  | 1. WORK TO BE ACCOMPLISHED          |  |
|  |  | 1. MECH 12. 13. 14. 15. 16. 17. 18. |  |
| 010  | RECEIVE, IDENTIFY & ATTACH PAPERWORK   | 1. 10 min                           |  |
| 015  | ALL REFERENCES ARE TO THE BASIC T.O. AND APPLICABLE PROCESS ORDERS. TECH DATA CONTAINS DETAILED NOTES, CAUTIONS, WARNINGS, DIMENSIONS AND TOLERANCES REQUIRING COMPLIANCE. | 1. 15 min                           |  |
| 020  | DISASSEMBLE.   | 1. 30 min                           |  |
| 030  | CLEAN AS REQUIRED.   | 1. 30 min                           |  |
| 040  | INSPECT AS REQUIRED.   | 1. 15 min                           |  |
| 050  | CHECK THE ELECTRICAL OPERATION OF SWITCH CONTAINED IN COVER & SWITCH ASSY.   | 1. 5 min                            |  |
| 060  | CHECK LEAKAGE RESISTANCE OF EACH CONTACT PIN & THE SWITCH HOUSING. MINIMUM ALLOWABLE RESISTANCE SHALL BE WITHIN SPECIFIED MECHMS.  | 1. 5 min                            |  |
| 070  | REPAIR AS NECESSARY.   | 1. 15 min                           |  |
| 080  | PLACE COVER & SWITCH ASSY IN OVEN & HEAT 1 HR. AT 350 DEG. F. TO LOOSEN  | 1. 15 min                           |  |

(CONTINUED)

*White*

*WG-10*  
*5-19-89*  
*LAVIC*  
*Mr. Richard Franklin*



115. DISC 16. PDN/  
 1. STATION/OP NO. 117. WORK TO BE ACCOMPLISHED 118. MECH 12" P 120" Q

*DELETE*

070 POTTING COMPOUND. →  
 WIPE SWITCH WITH A CLEAN CLOTH  
 MOISTENED WITH METHYLETHYLKETONE OR  
 EQUIVALENT.  
 ALLOW TO AIR DRY  
 WITHIN PRESCRIBED LIMITS.

ACT: DRS

100 POSITION SCREWS PREVIOUSLY REMOVED  
 INSIDE THE COVER WITH BOLTS LINED UP  
 & INSTALL BRACKET & SWITCH BODY  
 USING 2 LARGE ALLEN HEAD SCREWS &  
 LOCKWASHERS PREVIOUSLY REMOVED.  
 TORQUE SCREWS WITHIN LIMITS.

ACT: IN/LBS

TORQUE WRENCH

110 AT THE MOMENT SWITCH FLUNGER TRIPS  
 SWITCH TO ON, DISTANCE FROM FLUNGER  
 ACTIVATING LEVER TRIP TO COVER PART  
 ING SURFACE SHALL BE  
 WITHIN PRESCRIBED LIMITS.

ACT: IN/LBS

DEPTH MICROMETER

120 REPLACE AS NECESSARY.

*DELETE*

130 LUBRICATE AS REQUIRED.

140 REASSEMBLE

150 TORQUE ADAPTER REQUIRED

TORQUE WRENCH

160 INSTALL SCREWS THEN SUCCESSIVELY &  
 GRADUALLY TIGHTEN DIAGONALLY OPPO  
 SITE SCREWS UNTIL DIAPHRAGM IS DRAWN  
 DOWN EVENLY. TORQUE SCREWS WITHIN  
 IN/LBS LIMITS.

ACT:

170 INSTALL SCREWS, SUCCESSIVELY & GRAD-  
 UALLY TIGHTEN SCREWS UNTIL COVER IS  
 DRAWN DOWN EVENLY. TORQUE SCREWS TO  
 REQUIRED IN/LBS.

ACT:

180 POSITION SCREW IN CENTER HOLE OF  
 SWITCH HOUSING. THREAD SCREW INTO  
 (CONTINUED)

.5 IN/LBS

.30 IN/LBS

IN

IN

IN

.5 IN/LBS

IN



15. DISC 16. PDN/

16. STATION/UP NO. 117. WORK TO BE ACCOMPLISHED

118. RECH 12" P 125" D"

|     |   |          |
|-----|---|----------|
|     | HOUSING UNTIL MAX DEPTH IS REACHED  |          |
|     | ACT: INCH   |          |
| 120 | SPRING ADJUSTMENT DURING ASSEMBLY. OBTAIN ACT PRESS GAGE OF 4.4 PSI.  | .15 INCH |
| 200 | INSTALL THE ADAPTER IN BOLT OF COVER & SWITCH ASSY. TORQUE ADAPTER TO PRESCRIBED LIMITS.  | M        |
|     | ACT: IN/LBS   | .10 INCH |
| 210 | CHECK & INSURE WASHER IS STILL ALIGNED. INSTALL SPRING & PLUG IN HOUSING. TORQUE PLUG WITHIN LIMITS                                     | M        |
|     | ACT: IN/LBS   | .5 INCH  |
| 220 | INSTALL VALVE ASSY ON SWITCH HOUSING TORQUE VALVE BODY TO PRESCRIBED LIMITS.  | M        |
|     | ACT: IN/LBS   | .15 INCH |
| 230 | TEST SWITCH ASSY FOR LEAKAGE.   | M        |
|     | ACT: LEAK DETECTOR TESTER   |          |
| 240 | TESTING.  | .5 INCH  |
|     | COVER HALL:   | M        |
| 250 | CONNECT AIR HOSE ASSEMBLY   | M        |
| 260 | ADJUST THE ACTUATOR PRESS REGULATOR UNTIL ACTUATOR PRESSURE GAUGE INDICATES 7 PSI   | M        |
|     | REQ NOT REQ   |          |
| 270 | DEPRESS AND HOLD TEST BUTTON ON TEST SET TO DECREASE AIR PRESSURE ON SWITCH ASSEMBLY. THE ACTUATOR SWITCH SHALL NOT COME ON.            | M        |
| 280 | COMPLETE IAW F.O. 881-2 32-3 PARA 7-3. SUB PARA 6   | M        |
| 290 | AFTER 13 PSI CHECK IS SATISFACTORILY COMPLETED, REPEAT AT 35 PSI  | M        |
| 300 | OBSERVE HOW LONG ACTUATOR SWITCH INDICATOR OF TEST REMAINS LIT. THIS IS THE "ON" TIME OF SWITCH ASSY. "ON" TIME SHALL BE WITHIN LIMITS. | M        |
|     | ACT: SEC.   |          |
| 310 | ADJUST THE ACTUATOR PRESS REGULATOR UNTIL ACTUATOR PRESSURE GAUGE IN-   | M        |

(CONTINUED)



15.DISP 16.PDN/

STATION/OP NO. 117 WORK TO BE ACCOMPLISHED

13.NOCH112"PP120"Q"

DICATES 7 PSI.

SECOND TO INLET ADAPTER OF SWITCH ASSEMBLY.

REQ: NOT REQ:  
LEAK DETECTOR TESTER

320 IF READJUSTMENT OF SCRAM (20) WAS REQUIRED. RETEST THE 13 PSI CHECK.  
ACT

330 USING A SUITABLE SOURCE, GRADUALLY APPLY 400 - 500 PSI OF CLEAN DRY AIR AT A RATE NOT EXCEEDING 50 PSI PER SECOND TO INLET ADAPTER OF SWITCH ASSEMBLY.  
ACT  
LEAK DETECTOR TESTER

340 IMMERSE ACTUATOR ASSEMBLY IN A TANK OF CLEAN WATER AT ROOM TEMPERATURE & OBSERVE FOR LEAKAGE FOR 5 MINUTES. LEAKAGE SHALL NOT EXCEED ONE BUBBLE PER MINUTE.  
ACT

350 ACTED FORM 349 COMPLETED & FORWARDED TO DATA AUTOMATION.

360 SAFETY NOTE

370 I CERTIFY THAT THIS END ITEM HAS BEEN OVERHAULED (AM L.O., ETC), CURRENT REVISIONS, SUPPLEMENTS AND APPLICABLE PROCESS ORDERS.

380 OPERATIONS COMPLETED & PAPERWORK PROCESSED.

390 COMPLY WITH MAG 46-36, PARA 13

TYPE WORK PERFORMED OVERHAUL







| *****                               |   |  |                        |
|-------------------------------------|---|--|------------------------|
| CAEZ02 * WORK CONTROL DOCUMENT * JC |   | 1. DATE 88202 PAGE 2 OF 2 PAGES  |                        |
| 15. DISP-16. PDN/                   |   |  |                        |
| STATION/OP NO.                      |   | 17. WORK TO BE ACCOMPLISHED  | 18. MECH 19 "P" 20 "Q" |
|                                     |   | BETWEEN 16V & 30V WITH A ZENER DIODE<br>TO LIMIT ANY PEAKS OR SPIKES TO 33V.<br>* TEST FIXTURE |                        |
| 120                                 | TEST  |  | M. 2 hrs.              |
| 130                                 | SET THE ELECTRICAL SUPPLY TO GIVE AN<br>OUTPUT OF 16V.  |  | M. 2 hrs.              |
| 140                                 | SET THE ELECTRICAL SUPPLY TO GIVE AN<br>OUTPUT OF 30V.  |  | M. 2 hrs.              |
| 150                                 | AFTO FORM 349 COMPLETED & FORWARDED<br>TO DATA AUTOMATION.  |  | M. 5 hrs.              |
| 160                                 | I CERTIFY THAT THIS END ITEM HAS<br>BEEN OVERHAULED IAW T.O., TO TO<br>CURRENT REVISIONS, SUPPLEMENTS &<br>APPLICABLE PROCESS ORDERS. |  | M. 1 hr.               |
| 170                                 | OPERATIONS COMPLETED AND PAPERWORK<br>PROCESSED   |  | M. 5 hrs.              |
| * 175                               | COMPLY WITH MAOI 66-36, PARA 13<br><br>TYPE WORK PERFORMED → REPAIR   |  | M. 3 1/2 hrs.          |

\*  
PAC  
175



|   |              |
|---|--------------|
| 17. WORK TO BE ACCOMPLISHED   | 18. COMMENTS |
| RECEIVE, IDENTIFY & ATTACH PAPERWORK  |              |
| ALL REFERENCES ARE TO THE BASIC FIG. AND APPLICABLE PROLOGO GRADING. DATA CONTAINS DETAILED NOTING, CAUTIONS, WARNINGS, DIMENSIONS AND TOLERANCES REQUIRING COMPLIANCE. |              |
| NOTE TO MACHINE SHOP FOR REMOVAL OF END.  |              |
| DISASSEMBLE.  |              |
| GRIND GRIND AND GRIND (CONTINUED).  |              |
| REEL _____ (SEE FIG. _____)   |              |
| CLEAN AS REQUIRED.  |              |
| INSPECT.  |              |
| CHECK RESISTORS: FROM NO. 3 WHITE WIRE TO NO. 3 WHITE WIRE.   |              |
| ACT _____ MEG ACT _____ OHM OHMMETER  |              |
| WHITE WIRE ON SPARK GAP TO WHITE WIRE ON V2. RESISTANCE   |              |
| ACT: _____ OHMS ACT: _____ OHMS OHMMETER  |              |
| WHITE WIRE ON V4 TO NO.2 WHITE WIRE. RESISTANCE   |              |
| ACT: _____ OHMS ACT: _____ OHMS   |              |
| NO.4 BROWN WIRE TO NO.3 WHITE WIRE. CAPACITANCE, HINDY, APPLY 5000 VDC FOR 15 SECONDS MIN.  |              |
| ACTUAL _____ OF ACTUAL _____ OH   |              |
| XCAPACITOR ANALYZER   |              |
| NO.4 BROWN WIRE TO WHITE WIRE ON  |              |
| (CONTINUED)   |              |



|  |  |
|--|--|
| *****  |  |
| CAEY12 * WORK CONTROL DOCUMENT * JC  | 1. DATE 08307 PAGE 2 OF 4 PAGES  |
| 13. DIL 10. PDN/   |  |
| STATION NO. 117. WORK TO BE ACCOMPLISHED   | 10. RECOMMENDATIONS  |
| SPARK GAP. CAPACITANCE READY WITH<br>3500 VDC FOR 10 SECONDS MINIMUM<br>MINIMUM.   |  |
| ACTUAL _____ OF ACTUAL _____ OF<br>WHITE WIRE ON SPARK GAP TO TERMINAL<br>ON EXHAUST TIP LEAD OF SPARK GAP.<br>BREAKDOWN VOLTAGE                               |  |
| ACT: _____ VDC ACT: _____ VDC <i>Turbo Tester</i><br>TESTER SET IGNITION SYSTEM<br>ROLL RED WIRE (CATHODE) TO ROLL WHITE<br>WIRE (ANODE) TIGHT TO CATHODE TUBE |  |
| ACT: _____ MFLA ACT: _____ MFLA<br>WHITE WIRE ON SPARK GAP (CATHODE) TO<br>ROLL RED WIRE (ANODE) TIGHT TO CATHODE<br>TUBE TIGHT                                |  |
| ACT: _____ MFLA ACT: _____ MFLA<br>WHITE WIRE ON SPARK GAP (CATHODE) TO<br>ROLL RED WIRE (ANODE) TIGHT TO CATHODE<br>TUBE TIGHT                                |  |
| 000  | ADJUST VOLTAGE UNTIL SPARK GAP IS<br>1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 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1509. 1510. 1511. 1512. 1513. 1514. 1515. 1516. 1517. 1518. 1519. 1520. 1521. 1522. 1523. 1524. 1525. 1526. 1527. 1528. 1529. 1530. 1531. 1532. 1533. 1534. 1535. 1536. 1537. 1538. 1539. 1540. 1541. 1542. 1543. 1544. 1545. 1546. 1547. 1548. 1549. 1550. 1551. 1552. 1553. 1554. 1555. 1556. 1557. 1558. 1559. 1560. 1561. 1562. 1563. 1564. 1565. 1566. 1567. 1568. 1569. 1570. 1571. 1572. 1573. 1574. 1575. 1576. 1577. 1578. 1579. 1580. 1581. 1582. 1583. 1584. 1585. 1586. 1587. 1588. 1589. 1590. 1591. 1592. 1593. 1594. 1595. 1596. 1597. 1598. 1599. 1600. 1601. 1602. 1603. 1604. 1605. 1606. 1607. 1608. 1609. 1610. 1611. 1612. 1613. 1614. 1615. 1616. 1617. 1618. 1619. 1620. 1621. 1622. 1623. 1624. 1625. 1626. 1627. 1628. 1629. 1630. 1631. 1632. 1633. 1634. 1635. 1636. 1637. 1638. 1639. 1640. 1641. 1642. 1643. 1644. 1645. 1646. 1647. 1648. 1649. 1650. 1651. 1652. 1653. 1654. 1655. 1656. 1657. 1658. 1659. 1660. 1661. 1662. 1663. 1664. 1665. 1666. 1667. 1668. 1669. 1670. 1671. 1672. 1673. 1674. 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1841. 1842. 1843. 1844. 1845. 1846. 1847. 1848. 1849. 1850. 1851. 1852. 1853. 1854. 1855. 1856. 1857. 1858. 1859. 1860. 1861. 1862. 1863. 1864. 1865. 1866. 1867. 1868. 1869. 1870. 1871. 1872. 1873. 1874. 1875. 1876. 1877. 1878. 1879. 1880. 1881. 1882. 1883. 1884. 1885. 1886. 1887. 1888. 1889. 1890. 1891. 1892. 1893. 1894. 1895. 1896. 1897. 1898. 1899. 1900. 1901. 1902. 1903. 1904. 1905. 1906. 1907. 1908. 1909. 1910. 1911. 1912. 1913. 1914. 1915. 1916. 1917. 1918. 1919. 1920. 1921. 1922. 1923. 1924. 1925. 1926. 1927. 1928. 1929. 1930. 1931. 1932. 1933. 1934. 1935. 1936. 1937. 1938. 1939. 1940. 1941. 1942. 1943. 1944. 1945. 1946. 1947. 1948. 1949. 1950. 1951. 1952. 1953. 1954. 1955. 1956. 1957. 1958. 1959. 1960. 1961. 1962. 1963. 1964. 1965. 1966. 1967. 1968. 1969. 1970. 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1990. 1991. 1992. 1993. 1994. 1995. 1996. 1997. 1998. 1999. 2000. 2001. 2002. 2003. 2004. 2005. 2006. 2007. 2008. 2009. 2010. 2011. 2012. 2013. 2014. 2015. 2016. 2017. 2018. 2019. 2020. 2021. 2022. 2023. 2024. 2025. 2026. 2027. 2028. 2029. 2030. 2031. 2032. 2033. 2034. 2035. 2036. 2037. 2038. 2039. 2040. 2041. 2042. 2043. 2044. 2045. 2046. 2047. 2048. 2049. 2050. 2051. 2052. 2053. 2054. 2055. 2056. 2057. 2058. 2059. 2060. 2061. 2062. 2063. 2064. 2065. 2066. 2067. 2068. 2069. 2070. 2071. 2072. 2073. 2074. 2075. 2076. 2077. 2078. 2079. 2080. 2081. 2082. 2083. 2084. 2085. 2086. 2087. 2088. 2089. 2090. 2091. 2092. 2093. 2094. 2095. 2096. 2097. 2098. 2099. 2100. 2101. 2102. 2103. 2104. 2105. 2106. 2107. 2108. 2109. 2110. 2111. 2112. 2113. 2114. 2115. 2116. 2117. 2118. 2119. 2120. 2121. 2122. 2123. 2124. 2125. 2126. 2127. 2128. 2129. 2130. 2131. 2132. 2133. 2134. 2135. 2136. 2137. 2138. 2139. 2140. 2141. 2142. 2143. 2144. 21 |



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|--|--|------------------|-------------------|
| *****                                    |  |                  |                   |
| CACY12 * WORK CONTROL DOCUMENT * 00      |  | 1. DATE 00307    | PAGE 3 OF 4 PAGES |
| STATION NO. 117. WORK TO BE ACCOMPLISHED |  | 118. INSTRUMENTS | 119. TIME         |
| 160                                      | RESISTOR ASSY. TEST CURRENT FILTER LEADS FROM BLUE LEAD TO COMMON. OBSERVE METER.  | Ω                |                   |
|  | ACTUAL _____ OHMS  |                  |                   |
|  | *OHMMETER  |                  |                   |
| 170                                      | CONNECT FILTER LEADS FROM BLUE LEAD TO COMMON. OBSERVE METER.  | Ω                |                   |
|  | ACTUAL _____ OHMS  |                  |                   |
| 180                                      | TO 117 CHECK BATT. CAPACITOR. VOLT LEAD TO 11702   | Ω                |                   |
|  | ACTUAL _____ Ω   |                  |                   |
|  | *OHMMETER  |                  |                   |
| 190                                      | TO 127 CHECK CT CAPACITOR.   | Ω                |                   |
|  | ACTUAL _____ Ω   |                  |                   |
| 200                                      | CHECK FOR CONTINUITY BETWEEN WREN PINS B & C AND THEIR HOUSING. RESISTANCE SHOULD BE LESS THAN ONE OHM.                                  | Ω                |                   |
|  | *OHMMETER  |                  |                   |
| 210                                      | CONTINUITY BETWEEN PIN A & HOUSING. ALSO LESS THAN ONE OHM.  | Ω                |                   |
|  | ACTUAL _____ OHM   |                  |                   |
| 220                                      | CHECK CAPACITANCE BETWEEN WREN PINS B & HOUSING AND PIN C & HOUSING.   | Ω                |                   |
|  | ACTUAL _____ Ω   |                  |                   |
|  | ACTUAL _____ Ω   |                  |                   |
|  | *CAPACITOR ANALYZER  |                  |                   |
| 230                                      | CHECK INSULATION RESISTANCE BETWEEN INPUT PINS B & C.  | Ω                |                   |
|  | ACTUAL _____ MEGOHMS   |                  |                   |
|  | *MEGGER -- 500 VDC   |                  |                   |
| 240                                      | APPLY BREAKDOWN VOLTAGE OF 200 VDC AT FULL CHARGE FOR 10 SECONDS FROM EACH INPUT PIN B & C TO HOUSING. ADJ. IGNITION COMPONENTS TEST SET | Ω                |                   |
| 245                                      | SOLDER RESISTORS TOGETHER IN SERIES CIRCUIT, INSTALL TUBING & HEAT SHRINK BY EXPOSING TO 347 DEG. F. FOR ONE MINUTE MINIMUM.             | Ω                |                   |
| 250                                      | REASSEMBLE.  |                  |                   |



| *****                                  |  | *****                           |  |
|--|--|---------------------------------|--|
| 1. CABY12 * WORK CONTROL DOCUMENT * JC |  | 1. DATE 08307 PAGE 4 OF 4 PAGES |  |
| 116. DISC 16. FDN                      |  |                                 |  |
| 117. WORK TO BE ACCOMPLISHED           |  | 118. MECHANICAL WORK            |  |
| 255                                    | TEST OCC   |                                 |  |
| 260                                    | MOVE TO WELDING SHOP TO WELD LID.  |                                 |  |
| 265                                    | TEST AS REQUIRED.  |                                 |  |
| 270                                    | TEST: EVACUATE EXCITER TO ONE TONCH OF MERCURY & PRESURIZE WITH 10 TONCH OF HELIUM.                  |                                 |  |
| 275                                    | MASS SPECTROMETER LEAK DETECTOR  |                                 |  |
| 280                                    | CLOSE VACUUM LINE & PRESURIZE EXCITER TO 200 PSIA WITH DRY GAS.                                      |                                 |  |
| 285                                    | SEN DEGRADE HAVING A NEW TIGHTENING OF 100 PSI (20 TONCH) MAX & TIGHTEN OF 100 PSI PERCENT DETECTOR. |                                 |  |
| 290                                    | SENSE EXCITER IN WATER, MAINTAINED AT 100 PSI (20 TONCH) OF 100 PSI (20 TONCH) FOR ONE HOUR.         |                                 |  |
| 295                                    | RELEASE TIGHTEN OF EVACUATION TUBE.  |                                 |  |
| 300                                    | TEST: TESTING FOR MAIN BURNER.   |                                 |  |
| 305                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 310                                    | MAIN BURNER  |                                 |  |
| 315                                    | ACTUAL   |                                 |  |
| 320                                    | SENSE TIGHTEN  |                                 |  |
| 325                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 330                                    | MAIN BURNER  |                                 |  |
| 335                                    | ACTUAL   |                                 |  |
| 340                                    | SENSE TIGHTEN  |                                 |  |
| 345                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 350                                    | MAIN BURNER  |                                 |  |
| 355                                    | ACTUAL   |                                 |  |
| 360                                    | SENSE TIGHTEN  |                                 |  |
| 365                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 370                                    | MAIN BURNER  |                                 |  |
| 375                                    | ACTUAL   |                                 |  |
| 380                                    | SENSE TIGHTEN  |                                 |  |
| 385                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 390                                    | MAIN BURNER  |                                 |  |
| 395                                    | ACTUAL   |                                 |  |
| 400                                    | SENSE TIGHTEN  |                                 |  |
| 405                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 410                                    | MAIN BURNER  |                                 |  |
| 415                                    | ACTUAL   |                                 |  |
| 420                                    | SENSE TIGHTEN  |                                 |  |
| 425                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 430                                    | MAIN BURNER  |                                 |  |
| 435                                    | ACTUAL   |                                 |  |
| 440                                    | SENSE TIGHTEN  |                                 |  |
| 445                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 450                                    | MAIN BURNER  |                                 |  |
| 455                                    | ACTUAL   |                                 |  |
| 460                                    | SENSE TIGHTEN  |                                 |  |
| 465                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 470                                    | MAIN BURNER  |                                 |  |
| 475                                    | ACTUAL   |                                 |  |
| 480                                    | SENSE TIGHTEN  |                                 |  |
| 485                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 490                                    | MAIN BURNER  |                                 |  |
| 495                                    | ACTUAL   |                                 |  |
| 500                                    | SENSE TIGHTEN  |                                 |  |
| 505                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 510                                    | MAIN BURNER  |                                 |  |
| 515                                    | ACTUAL   |                                 |  |
| 520                                    | SENSE TIGHTEN  |                                 |  |
| 525                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 530                                    | MAIN BURNER  |                                 |  |
| 535                                    | ACTUAL   |                                 |  |
| 540                                    | SENSE TIGHTEN  |                                 |  |
| 545                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 550                                    | MAIN BURNER  |                                 |  |
| 555                                    | ACTUAL   |                                 |  |
| 560                                    | SENSE TIGHTEN  |                                 |  |
| 565                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 570                                    | MAIN BURNER  |                                 |  |
| 575                                    | ACTUAL   |                                 |  |
| 580                                    | SENSE TIGHTEN  |                                 |  |
| 585                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 590                                    | MAIN BURNER  |                                 |  |
| 595                                    | ACTUAL   |                                 |  |
| 600                                    | SENSE TIGHTEN  |                                 |  |
| 605                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 610                                    | MAIN BURNER  |                                 |  |
| 615                                    | ACTUAL   |                                 |  |
| 620                                    | SENSE TIGHTEN  |                                 |  |
| 625                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 630                                    | MAIN BURNER  |                                 |  |
| 635                                    | ACTUAL   |                                 |  |
| 640                                    | SENSE TIGHTEN  |                                 |  |
| 645                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 650                                    | MAIN BURNER  |                                 |  |
| 655                                    | ACTUAL   |                                 |  |
| 660                                    | SENSE TIGHTEN  |                                 |  |
| 665                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 670                                    | MAIN BURNER  |                                 |  |
| 675                                    | ACTUAL   |                                 |  |
| 680                                    | SENSE TIGHTEN  |                                 |  |
| 685                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 690                                    | MAIN BURNER  |                                 |  |
| 695                                    | ACTUAL   |                                 |  |
| 700                                    | SENSE TIGHTEN  |                                 |  |
| 705                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 710                                    | MAIN BURNER  |                                 |  |
| 715                                    | ACTUAL   |                                 |  |
| 720                                    | SENSE TIGHTEN  |                                 |  |
| 725                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 730                                    | MAIN BURNER  |                                 |  |
| 735                                    | ACTUAL   |                                 |  |
| 740                                    | SENSE TIGHTEN  |                                 |  |
| 745                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 750                                    | MAIN BURNER  |                                 |  |
| 755                                    | ACTUAL   |                                 |  |
| 760                                    | SENSE TIGHTEN  |                                 |  |
| 765                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 770                                    | MAIN BURNER  |                                 |  |
| 775                                    | ACTUAL   |                                 |  |
| 780                                    | SENSE TIGHTEN  |                                 |  |
| 785                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 790                                    | MAIN BURNER  |                                 |  |
| 795                                    | ACTUAL   |                                 |  |
| 800                                    | SENSE TIGHTEN  |                                 |  |
| 805                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 810                                    | MAIN BURNER  |                                 |  |
| 815                                    | ACTUAL   |                                 |  |
| 820                                    | SENSE TIGHTEN  |                                 |  |
| 825                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 830                                    | MAIN BURNER  |                                 |  |
| 835                                    | ACTUAL   |                                 |  |
| 840                                    | SENSE TIGHTEN  |                                 |  |
| 845                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 850                                    | MAIN BURNER  |                                 |  |
| 855                                    | ACTUAL   |                                 |  |
| 860                                    | SENSE TIGHTEN  |                                 |  |
| 865                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 870                                    | MAIN BURNER  |                                 |  |
| 875                                    | ACTUAL   |                                 |  |
| 880                                    | SENSE TIGHTEN  |                                 |  |
| 885                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 890                                    | MAIN BURNER  |                                 |  |
| 895                                    | ACTUAL   |                                 |  |
| 900                                    | SENSE TIGHTEN  |                                 |  |
| 905                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 910                                    | MAIN BURNER  |                                 |  |
| 915                                    | ACTUAL   |                                 |  |
| 920                                    | SENSE TIGHTEN  |                                 |  |
| 925                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 930                                    | MAIN BURNER  |                                 |  |
| 935                                    | ACTUAL   |                                 |  |
| 940                                    | SENSE TIGHTEN  |                                 |  |
| 945                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 950                                    | MAIN BURNER  |                                 |  |
| 955                                    | ACTUAL   |                                 |  |
| 960                                    | SENSE TIGHTEN  |                                 |  |
| 965                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 970                                    | MAIN BURNER  |                                 |  |
| 975                                    | ACTUAL   |                                 |  |
| 980                                    | SENSE TIGHTEN  |                                 |  |
| 985                                    | SEN ROTOR SPEED (RPM) 10000  |                                 |  |
| 990                                    | MAIN BURNER  |                                 |  |
| 995                                    | ACTUAL   |                                 |  |



1 CAEM04 \* WORK CONTROL DOCUMENT \* JC 1 DATE 88237 PAGE 1 OF 5 PAGES  
 12. ORIG/PROD NR 13. QUANTITY 14. PROD SECTION/REC 15. DATE SCHED 16. DATE COMP  
 38643A 1 MTPCAB 1 89094 1

7. ART NUMBER 19. ITEM SERIAL NR 10/12. TECH DATA/OPTIONAL  
 311D12183 1 1 PD MAT83-13  
 10. MODEL/DESIGN/SERIES 11. STOCK NR 1001 2 21 3 8/12/11  
 3/2 15 1 2915009833452  
 13. MISC 14. NOUN/END ITEM NOUN  
 1 TEMP AMPLIFIER AMPLIFIER PAU  
 PERK/FA1LAD/85920

10. DIOP 16. PERZ  
 17. WORK TO BE ACCOMPLISHED 18. RECH 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30.

|     |   |   |   |
|-----|---|---|---|
| 030 | RECEIVE, IDENTIFY & ATTACH PAPERWORK  | T | B |
| 040 | ALL REFERENCES ARE TO THE BASIC T.O. AND APPLICABLE PROCESS ORDERS. TECH DATA CONTAINS DETAILED NOTES, CAUTIONS, WARNINGS, DIMENSIONS, AND TOLERANCES REQUIRING COMPLIANCE. | B |   |
| 050 | INSPECTION (VISUAL)   | B |   |
| 060 | FULL COOLING TUBE TEST: NO LEAKAGE ALLOWED.   | B |   |
| 070 | (PRE-TEST) RESISTANCE CHECK   | B |   |
|     | CONNECTOR PINS OHMS (ACT)   |   |   |
|     | J1 "A" AND "B"  |   |   |
|     | J2 "A" AND "B"  |   |   |
|     | J3 "B" AND "C"  |   |   |
| 080 | POWER APPLICATION TEST (PRE TEST) DIFFERENTIAL CURRENT - ACT MA.  | B |   |
|     | R100 COUNTER-CLOCKWISE RESULTANT- ACT MV.   |   |   |
|     | R100 CLOCKWISE- RESULTANT- ACT MV.  |   |   |
| 090 | NULL VOLTAGE COMPENSATION (PRE-TEST)  | B |   |
| 070 | STATIC GAIN TEST (PRE-TEST)   | B |   |
|     | MILLIVOLTS DIFFERENTIAL OUTPUT FROM NULL ACT (MA.)  |   |   |
|     | F1  |   |   |
|     | F5  |   |   |
|     | F10   |   |   |
|     | F5  |   |   |
|     | 0   |   |   |

20 min warm up  
 4 min set up

(CONTINUED)



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 15.DISI-16.PDN/  
 STATION/UP NO. 117.WORK TO BE ACCOMPLISHED 18.RECH19"P"120"Q"

|             |  |                            |  |  |
|-------------|--|----------------------------|--|--|
|             |  | -1<br>-5<br>-10<br>-3<br>0 |  |  |
| 000         | TEMPERATURE VS. ENGINE SPEED TEST (PRE TEST)   |                            |  |  |
|             | ALTERNATOR FREQUENCY CPS   | MILLIVOLT VALVE ACT        |  |  |
|             | 040<br>049<br>010<br>708<br>600<br>600<br>829  |                            |  |  |
| 070         | FREQUENCY RESPONSE TEST (PRE-TEST)<br>27 LINES, FREQUENCY .30 TO .35CPS<br>ACT:<br>30 LINES, FREQUENCY .45 TO .54 CPS<br>ACT:      |                            |  |  |
| 100         | SPEED DERIVATIVE TEST (PRE-TEST)<br>.1 CPS (23-27MV) ACT<br>.2 CPS (45-57MV) ACT<br>.3 CPS (68-88MV) ACT<br>.5 CPS (116-157MV) ACT |                            |  |  |
| 120<br>INFO | IF ALL TEST PASSED, MOVE TO STEP 340   |                            |  |  |
| 130         | DISASSEMBLY AS REQ. 45 min   |                            |  |  |
| 140         | CLEAN AS REQ. 20 min   |                            |  |  |
| 150         | INSPECT PARTS: 10 min  |                            |  |  |
| 160         | INSPECT POTENTIOMETER: 5 min   |                            |  |  |
| 170         | REPAIR OR REPLACE AS REQ. take 2hr<br>glue 1hr<br>connect 1/2 hr   |                            |  |  |
| 180         | REASSEMBLY OF SUBASSEMBLIES<br>Soldering: 1hr - 5 each - 1hr<br>Solder: 20 min   |                            |  |  |
| 190         | REASSEMBLY OF COMPONENTS<br>see notes  |                            |  |  |

← End in this



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CAEM04 \* WORK CONTROL DOCUMENT \* 00 1. DATE 08239 PAGE 3 OF 5 PAGES  
15.DISP-16.PDN/  
STATION/OP NO. 117.WORK TO BE ACCOMPLISHED 118.MECH/19/11/00 00

| 200                  | SATURABLE-REACTOR CURRENT TEST<br>RESISTANCE OF R101 DECADE BOX<br>ACT  | n                    |                               |            |    |             |  |     |             |    |    |             |  |   |
|----------------------|---|----------------------|-------------------------------|------------|----|-------------|--|-----|-------------|----|----|-------------|--|---|
| 210                  | TOP SPEED BREAK TEST<br>RESISTANCE OF R104 DECADE BOX<br>ACT  | n                    |                               |            |    |             |  |     |             |    |    |             |  |   |
| 220                  | THERMOCOUPLE AMPLIFIER TEST<br>R104 ACT<br>R106 ACT   | n                    |                               |            |    |             |  |     |             |    |    |             |  |   |
| 230                  | SLOPE TEST<br>R102 ACT  | n                    |                               |            |    |             |  |     |             |    |    |             |  |   |
| 240                  | FREQUENCY RESPONSE TEST<br>27 LINES, FREQUENCY .30 TO .33 CPS<br>ACT<br>35 LINES, FREQUENCY .45 TO .54 CPS<br>ACT   | n                    |                               |            |    |             |  |     |             |    |    |             |  |   |
| 250                  | SPEED DERIVATIVE TEST<br>.1 CPS (23-29MV) ACT<br>.2 CPS (45-57MV) ACT<br>.3 CPS (68-86MV) ACT<br>.5 CPS (116-157MV) ACT   | n                    |                               |            |    |             |  |     |             |    |    |             |  |   |
| 260                  | INSTALL RESISTOR  | n                    |                               |            |    |             |  |     |             |    |    |             |  |   |
| 270                  | RESISTANCE CHECK<br><table><tr><th>CONNECTOR</th><th>PINS</th><th>OHMS (ACT)</th></tr><tr><td>J1</td><td>"A" AND "B"</td><td></td></tr><tr><td>J2</td><td>"A" AND "B"</td><td></td></tr><tr><td>J3</td><td>"A" AND "B"</td><td></td></tr></table> | CONNECTOR            | PINS                          | OHMS (ACT) | J1 | "A" AND "B" |  | J2  | "A" AND "B" |    | J3 | "A" AND "B" |  | n |
| CONNECTOR            | PINS  | OHMS (ACT)           |                               |            |    |             |  |     |             |    |    |             |  |   |
| J1                   | "A" AND "B"   |                      |                               |            |    |             |  |     |             |    |    |             |  |   |
| J2                   | "A" AND "B"   |                      |                               |            |    |             |  |     |             |    |    |             |  |   |
| J3                   | "A" AND "B"   |                      |                               |            |    |             |  |     |             |    |    |             |  |   |
| 280                  | POWER APPLICATION TEST<br>DIFFERENTIAL CURRENT-<br>ACT mA.<br>R100 COUNTER-CLOCKWISE<br>RESULTANT-ACT: mV.<br>R100 CLOCKWISE-<br>RESULTANT-ACT: mV.   | n                    |                               |            |    |             |  |     |             |    |    |             |  |   |
| 290                  | NULL VOLTAGE COMPENSATION   | n                    |                               |            |    |             |  |     |             |    |    |             |  |   |
| 300                  | STATIC GAIN TEST<br><table><tr><th>MILLIVOLTS FROM NULL</th><th>DIFFERENTIAL OUTPUT ACT (mA.)</th></tr><tr><td>+1</td><td></td></tr><tr><td>+5</td><td></td></tr><tr><td>+10</td><td></td></tr><tr><td>+3</td><td></td></tr></table>              | MILLIVOLTS FROM NULL | DIFFERENTIAL OUTPUT ACT (mA.) | +1         |    | +5          |  | +10 |             | +3 |    | n           |  |   |
| MILLIVOLTS FROM NULL | DIFFERENTIAL OUTPUT ACT (mA.)   |                      |                               |            |    |             |  |     |             |    |    |             |  |   |
| +1                   |   |                      |                               |            |    |             |  |     |             |    |    |             |  |   |
| +5                   |   |                      |                               |            |    |             |  |     |             |    |    |             |  |   |
| +10                  |   |                      |                               |            |    |             |  |     |             |    |    |             |  |   |
| +3                   |   |                      |                               |            |    |             |  |     |             |    |    |             |  |   |

*sign →*  
*1000 ohm*  
*use the*  
*500 ohm*

*N/A*

*Normally this is the hot test*

Sign →  
1000 + 100  
use the  
5.0  
d.m.s.

N.A

Normally  
this is  
the hot  
test



\*\*\*\*\*  
 CAEM04 \* WORK CONTROL DOCUMENT \* JC 1.DAVE 80209 PAGE 4 OF 5 PAGES  
 115.DISP-15.PDN/  
 STATION/OP NO. 117.WORK TO BE ACCOMPLISHED 118.MECH 19" 120"Q"

|                |  |                 |  |  |
|----------------|--|-----------------|--|--|
|                |  | 0               |  |  |
|                |  | -1              |  |  |
|                |  | -5              |  |  |
|                |  | -10             |  |  |
|                |  | -3              |  |  |
|                |  | 0               |  |  |
| 310            | TEMPERATURE VS ENGINE SPEED TEST   |                 |  |  |
|                | ALTERNATOR   | MULTIVOLT VALVE |  |  |
|                | FREQUENCY  | ACT.            |  |  |
|                | CPS  |                 |  |  |
|                | 0-50   |                 |  |  |
|                | 0-7  |                 |  |  |
|                | 0-10   |                 |  |  |
|                | 7-8  |                 |  |  |
|                | 8-9  |                 |  |  |
|                | 8-10   |                 |  |  |
|                | 0-27   |                 |  |  |
| 320            | FREQUENCY RESPONSE TEST  |                 |  |  |
|                | 27 LINES, FREQUENCY .30 TO .35 CPS   |                 |  |  |
|                | ACT:   |                 |  |  |
|                | 35 LINES, FREQUENCY .45 TO .54 CPS   |                 |  |  |
|                | ACT:   |                 |  |  |
| 330            | SPEED DERIVATIVE TEST  |                 |  |  |
|                | .1 CPS (23-29MV)   | ACT             |  |  |
|                | .2 CPS (45-57MV)   | ACT             |  |  |
|                | .3 CPS (68-86MV)   | ACT             |  |  |
|                | .5 CPS (116-157MV)   | ACT             |  |  |
| 340            | SHOCK TEST <u>10 min</u>   |                 |  |  |
|                | OUTPUT DIFFERENTIAL CURRENT.   |                 |  |  |
|                | ACT:   |                 |  |  |
| 350            | MECHANICAL PRESSURE TEST <u>10 min</u>   |                 |  |  |
|                | OUTPUT DIFFERENTIAL CURRENT.   |                 |  |  |
|                | ACT:   |                 |  |  |
| 360            | VIBRATION TEST <u>30 min</u>   |                 |  |  |
| <del>370</del> | HIGH TEMPERATURE TEST <u>20 min</u>  |                 |  |  |
| 380            | COMPLETE & FORWARD AFTO 349 TO DATA PROCESSING.  |                 |  |  |
| 390            | I CERTIFY THAT THIS END ITEM HAS BEEN OVERHAULED IAW T.O., TOTO CURRENT REVISIONS, SUPPLEMENTS, AND APPLICABLE PROCESS ORDERS. |                 |  |  |
| 400            | OPERATIONS COMPLETE, PAPERWORK PROCESSED.  |                 |  |  |







| *****  |  |                       |  |  |  |  |  |         |  |       |  |       |  |
|--|--|-----------------------|--|--|--|--|--|---------|--|-------|--|-------|--|
| CAEA01 * WORK CONTROL DOCUMENT * 72-10 1.DATE 86121 PAGE 1 OF 3 PAGES      |  |                       |  |  |  |  |  |         |  |       |  |       |  |
| *****  |  |                       |  |  |  |  |  |         |  |       |  |       |  |
| 12.ORIG/PROD NR 13.QUANTITY 14.PROD SECTION/RCC 15.DATE SCHED 16.DATE COMP |  |                       |  |  |  |  |  |         |  |       |  |       |  |
| 50217A     MTPCAP   86198  |  |                       |  |  |  |  |  |         |  |       |  |       |  |
| *****  |  |                       |  |  |  |  |  |         |  |       |  |       |  |
| 7.PART NUMBER  |  | 19.ITEM SERIAL NR     |  | 18/12.TECH DATA/OPTIONAL   |  |  |  |         |  |       |  |       |  |
| 44387  |  |                       |  | PO-MAT86-3   |  |  |  |         |  |       |  |       |  |
|  |  |                       |  | 8E1-8-9-3 84153H   |  |  |  |         |  |       |  |       |  |
| 10.MODEL/DESIGN/SERIES   |  | 11.STOCK NR           |  | CHG 9  |  |  |  |         |  |       |  |       |  |
| TF33-PW102   |  | 2925011615596RV       |  |  |  |  |  |         |  |       |  |       |  |
| *****  |  |                       |  |  |  |  |  |         |  |       |  |       |  |
| 13.MISC  |  | 14.NOUN/END ITEM NOUN |  |  |  |  |  |         |  |       |  |       |  |
|  |  | IGNITION EXCITER      |  |  |  |  |  |         |  |       |  |       |  |
| *****  |  |                       |  |  |  |  |  |         |  |       |  |       |  |
| 15.DISP-16.PDN/  |  |                       |  |  |  |  |  |         |  |       |  |       |  |
| STATION  |  | OP NO.                |  | 17.WORK TO BE ACCOMPLISHED   |  |  |  | 18.MECH |  | 19"P" |  | 20"Q" |  |
| W-43   |  | 010                   |  | RECEIVE, IDENTIFY & ATTACH PAPERWORK   |  |  |  | M       |  |       |  |       |  |
|  |  | 015                   |  | ALL REFERENCES ARE TO THE BASIC T.O. & APPLICABLE PROCESS ORDERS. TECH DATA CONTAINS DETAILED NOTES, CAUTIONS, WARNINGS, DIMENSIONS & TOLERANCES REQUIRING COMPLIANCE.                 |  |  |  | M       |  |       |  |       |  |
|  |  | 020                   |  | DISASSEMBLE.   |  |  |  | M       |  |       |  |       |  |
|  |  | 030                   |  | CLEAN AS REQUIRED.   |  |  |  | M       |  |       |  |       |  |
|  |  | 040                   |  | INSPECT AS REQUIRED.   |  |  |  | M       |  |       |  |       |  |
|  |  | 050                   |  | CAPACITOR TEST: TRIGGER CAPACITOR, APPLY 5000VDC BETWEEN CAPACITOR TERMINAL & GROUND FOR NOT MORE THAN 30 SECONDS. LEAKAGE.<br>.<br>ACTUAL _____ MICROAMP.<br>*CAPACITOR BRIDGE TESTER |  |  |  | M       |  |       |  |       |  |
|  |  | 060                   |  | CHECK CAPACITANCE.<br>.<br>ACTUAL _____ UF   |  |  |  | M       |  |       |  |       |  |
|  |  | 080                   |  | CHECK CAPACITANCE.<br>.<br>ACTUAL _____ UF   |  |  |  | M       |  |       |  |       |  |
|  |  | 090                   |  | TEST 3 STORAGE CAPACITORS AS A CONNECTED GROUP. APPLY 4000VDC BETWEEN FREE END ON INTER-CONNECT LEAD & GROUND ON CASE. LEAKAGE<br>.<br>ACTUAL _____ MICROAMP                           |  |  |  | M       |  |       |  |       |  |
|  |  | 100                   |  | CHECK CAPACITANCE AT SAME TERMINAL<br>.<br>ACTUAL _____ UF   |  |  |  | M       |  |       |  |       |  |
| *****  |  |                       |  |  |  |  |  |         |  |       |  |       |  |



|   |  |  |  |  |  |   |  |  |  |
|---|--|--|--|--|--|---|--|--|--|
| *****   |  |  |  |  |  |   |  |  |  |
| CAEA01 * WORK CONTROL DOCUMENT * 72-10 1.DATE 86121 PAGE 2 OF 5 PAGES |  |  |  |  |  |   |  |  |  |
| 113.DISP-16.PDN/  |  |  |  |  |  |   |  |  |  |
| STATION/OP NO. 117.WORK TO BE ACCOMPLISHED 118.MECH119"P"120"Q"       |  |  |  |  |  |   |  |  |  |
| 110   | FILTER TEST: APPLY 300 VDC BETWN "B" PIN & GROUND FOR NO MORE THAN 30 SEC THERE MUST BE NO SIGN OF BREAKDOWN.                                  |  |  |  |  | M |  |  |  |
| 120   | CHECK LEAKAGE BETWEEN EITHER TERMINAL AND CASE:<br>ACTUAL _____ MEGOHMS<br>*VACUUMTUBE VOLTMETER   |  |  |  |  | M |  |  |  |
| 130   | CAPACITANCE.<br>ACTUAL _____ UF<br>*CAPACITOR BRIDGE TESTER  |  |  |  |  | M |  |  |  |
| 140   | RESISTOR TEST (29): MEASURE RESISTANCE BETWN UPPER TERMINAL OF RESISTOR LEAD & CASE.<br>ACTUAL _____ OHMS<br>*VACUUMTUBE VOLTMETER             |  |  |  |  | M |  |  |  |
| 160   | TEST RESISTOR ASSY (45) MEASURE RESISTANCE BETWEEN RESISTOR LEADS.<br>ACTUAL _____ MEGOHMS   |  |  |  |  | M |  |  |  |
| 170   | TEST EACH RESISTOR INDIVIDUALLY; MEASURE RESISTANCE BETWN RESISTOR TERMINALS.<br>ACTUAL _____ MEGOHMS  |  |  |  |  | M |  |  |  |
| 180   | RECTIFIER TEST: USE HIGH VOLTAGE REGULATOR TO ADJUST VOLTAGE TO 5000V READ INVERSE VOLTAGE CURRENT.<br>ACTUAL _____ MEGOHMS<br>*TEST FIXTURE   |  |  |  |  | M |  |  |  |
| 190   | RAISE VOLTAGE UNTIL MILLIAMMETER SHOWS READING OF 100MA. FORWARD VOLTAGE DROP ACROSS RECTIFIER.<br>ACTUAL _____ VOLTS<br>*DC VOLTAGE REGULATOR |  |  |  |  | M |  |  |  |
| 240   | READ VOLTAGE OVER A PERIOD OF 30 SECONDS.<br>ACTUAL _____ VOLTS  |  |  |  |  | M |  |  |  |







|   |     |   |                  |  |
|---|-----|---|------------------|--|
| *****   |     |   |                  |  |
| CAEA01 * WORK CONTROL DOCUMENT * 72-10 1.DATE 86121 PAGE 4 OF 3 PAGES |     |   |                  |  |
| 15.DISP-16.PDN/   |     |   |                  |  |
| STATION/OP NO. 117.WORK TO BE ACCOMPLISHED 18.RECH 19"P" 20"Q"        |     |   |                  |  |
|   |     | INPUT CURRENT   |                  |  |
|   |     | SPARK RATE  |                  |  |
|   |     | ACTUAL_____AMP  | ACTUAL_____SR    |  |
|   |     | INPUT VOLTAGE   | 24               |  |
|   |     | INPUT CURRENT   |                  |  |
|   |     | SPARK RATE  |                  |  |
|   |     | ACTUAL_____AMP  | ACTUAL_____SR    |  |
|   |     | INPUT VOLTAGE   | 29               |  |
|   |     | INPUT CURRENT   |                  |  |
|   |     | SPARK RATE  |                  |  |
|   |     | ACTUAL_____AMP  | ACTUAL_____SR    |  |
|   | 390 | TIGHTEN HEX NUTS AT INPUT END, LARGE NUT SHOULD BE TORQUED & THE 2 SMALLER NUTS.  | M                |  |
|   |     | ACTUAL_____FT/LBS   | ACTUAL_____IN/LB |  |
|   |     | *TORQUE WRENCH  |                  |  |
|   | 400 | SOLDER UNIT.  | M                |  |
|   | 410 | TEST EXCITER FOR LEAKS USING A PROBE WITH 14 PSIG. LEAKAGE.   | M                |  |
|   |     | ACTUAL_____CC   |                  |  |
|   |     | *VEECO LEAK DETECTOR  |                  |  |
|   | 420 | SUBMERGE EXCITER IN WATER HEATED TO MINIMUM OF 49 DEG C (120 DEG F) FOR 1 MINUTE.   | M                |  |
|   | 430 | BAKE CHARGING: BAKE EXCITER 15 MIN. AT 275 DEG F. THEN TURN ON VACUUM PUMP SWITCH & EXHAUST EXCITER WHILE CONTINUING TO BAKE FOR ADDITIONAL 15 MINUTES. | M                |  |
| W-41  | 440 | PAINT.  | M                |  |
|   | 450 | BAKE IN OVEN FOR 1 HR AT A TEMP OF 250 DEG F. OR AIR DRY.   | M                |  |
|   | 460 | TEST: SET MICROMETER UNTIL SCALE READING INDICATES SPARK GAP OF 0.100 INCH. ADJUST NITROGEN INLET UNTIL GAGE HOLDS STEADY.                              | M                |  |
| (CONTINUED)   |     |   |                  |  |



15.DISP-16.PDN/

STATION/OP NO. 17.WORK TO BE ACCOMPLISHED 18.MECH 19"P" 20"Q"

|     |   |   |   |  |   |
|-----|---|---|---|--|---|
|     |   | ACTUAL _____ PSIG<br>IGNITION OUTPUT TESTER |   |  |   |
| 470 | TEST:   |   |   |  | B |
|     | INPUT VOLTAGE   | 14  | M |  |   |
|     | INPUT CURRENT   |   |   |  |   |
|     | SPARK RATE  |   |   |  |   |
|     | ACTUAL _____ AMP  |   |   |  |   |
|     | ACTUAL _____ PER 10 SEC   |   |   |  |   |
|     | INPUT VOLTAGE   | 24  |   |  |   |
|     | INPUT CURRENT   |   |   |  |   |
|     | SPARK RATE  |   |   |  |   |
|     | ACTUAL _____ AMP  |   |   |  |   |
|     | ACTUAL _____ PER 10 SEC   |   |   |  |   |
|     | INPUT VOLTAGE   | 29  |   |  |   |
|     | INPUT CURRENT   |   |   |  |   |
|     | SPARK RATE  |   |   |  |   |
|     | ACTUAL _____ AMP  |   |   |  |   |
|     | ACTUAL _____ PER 10 SEC   |   |   |  |   |
| 490 | APPLY 24V INPUT CURRENT. OBTAIN ONE<br>(1) OF THE FOLLOWING:<br>METER READING   |   | M |  |   |
|     | 72.5  |   |   |  |   |
|     | 78.0  |   |   |  |   |
|     | 83.0  |   |   |  |   |
|     | 87.5  |   |   |  |   |
|     | 91.5  |   |   |  |   |
|     | ACTUAL _____  |   |   |  |   |
| 500 | AFTO FORM 349 COMPLETED & FORWARDED<br>TO DATA AUTOMATION.  |   | M |  |   |
| 549 | I CERTIFY THAT THIS END ITER HAS<br>BEEN OVERHAULED IAW T.O., TCTO,<br>CURRENT REVISIONS, SUPPLEMENTS &<br>APPLICABLE PROCESS ORDERS. |   | M |  |   |
| 546 | COMPLY WITH MAOI 66-36, PARA 13   |   | M |  |   |
|     | TYPE WORK PERFORMED _____   |   |   |  |   |
| 550 | OPERATIONS COMPLETED & PAPERWORK<br>PROCESSED.  |   | M |  |   |



2.2

| *****   |   |                                 |               |
|---|---|---------------------------------|---------------|
| 1. CAEM08 * WORK CONTROL DOCUMENT * JC            |   | 1. DATE 88239 PAGE 1 OF 4 PAGES |               |
| *****   |   |                                 |               |
| 2. ORIG/PROD NR                                   | 3. QUANTITY   | 4. PROD SECTION/RCC             | 5. DATE SCHED |
| 30845A  | 1   | MTPCAP                          | 8/7/74        |
| *****   |   |                                 |               |
| 6. KIT NUMBER                                     | 19. ITEM SERIAL NR  | 18/12. TECH DATA/OPTIONAL       |               |
| 633E490001  | 1   | FD MAT08-13                     |               |
| 10. MODEL/DESIGN/SERIES                           |   | 11. STOCK NR                    | 83014H        |
| 377-17  | 2915001338007PL   | 6J1 2-25-3                      | 88061H        |
| 13. MISC  |   | 14. NOON/END ITEM NOON          | CHG 10        |
| APPLIFIER, TEMP                                   |   | PACI                            |               |
| PERRY/MATLAC/80920                                |   | Jen 05 Dye                      |               |
| 15. DISP  |   | 16. PEN                         |               |
| STATION/NO. 117. WORK TO BE ACCOMPLISHED          |   | 110. TECH 12" 120" 6"           |               |
| 72 10 ITEM  |   |                                 |               |
| 27717A  |   |                                 |               |
| *****   |   |                                 |               |
| 010   | RECEIVE, IDENTIFY & ATTACH PAPERWORK  | T n                             |               |
| *****   |   |                                 |               |
| 020   | ALL REFERENCES ARE TO THE BASIC T.O. AND APPLICABLE PROCESS ORDERS. TECH DATA CONTAINING DETAILED NOTES, CAUTIONS, WARNINGS, DIMENSIONS, AND TOLERANCES REQUIRING COMPLIANCE. | n                               |               |
| *****   |   |                                 |               |
| 030   | INSPECTION (VISUAL)   | n                               |               |
| *****   |   |                                 |               |
| 040   | PERFORM FULL COOLING TUBE TEST (PRE-TEST) (PARA 11-50) FUEL TEMP: ACT _____ DEG.  | n                               |               |
| *****   |   |                                 |               |
| 050   | PERFORM INSULATION RESISTANCE TEST (PRE-TEST) ACT _____ ALGONMS OVEN ACT _____ ALGONMS  | n                               |               |
| *****   |   |                                 |               |
| 060   | SET UP AMPLIFIER FOR PRE-TEST (PARA 11-7)   | n                               |               |
| *****   |   |                                 |               |
| 070   | PERFORM OPEN THERMOCOUPLE PRE-TEST.   | n                               |               |
| *****   |   |                                 |               |
| 080   | NULL VOLTAGE COMPENSATION (PRE-TEST)  | n                               |               |
| *****   |   |                                 |               |
| 090   | PERFORM POTENTIOMETER RANGE TEST (PRE-TEST)   | n                               |               |
| *****   |   |                                 |               |
| 100   | STATIC GAIN TEST (PRE-TEST)   | n                               |               |
| MILLIVOLTS DIFFERENTIAL OUTPUT FROM NULL ACT (mA) |   |                                 |               |
| +1  |   |                                 |               |
| *****   |   |                                 |               |
| (CONTINUED)                                       |   |                                 |               |



117. WORK TO BE ACCOMPLISHED

118. MECH 19" 120" 2"

|     |  |                              |  |  |  |
|-----|--|------------------------------|--|--|--|
|     |  | +5<br>+10<br>-1<br>-5<br>-10 |  |  |  |
| 110 | TEMPERATURE VS. ENGINE SPEED TEST<br>(PRE-TEST) NORMAL SCHEDULE    |                              |  |  |  |
|     | ALTERNATOR<br>FREQUENCY<br>HZ                                      | T 5 LIMITS<br>ACT            |  |  |  |
|     | 600<br>700<br>740<br>755<br>770<br>792<br>804<br>816<br>825<br>840 |                              |  |  |  |
| 120 | TEMPERATURE VS ENGINE SPEED RESET<br>TEST (PRE-TEST)               |                              |  |  |  |
|     | ALTERNATOR<br>FREQUENCY<br>HZ                                      | T 5 LIMITS<br>ACT            |  |  |  |
|     | 792<br>840   |                              |  |  |  |
| 130 | ACCELERATION (STALL) RESET<br>(PRE-TEST)                           |                              |  |  |  |
|     | ALTERNATOR<br>FREQUENCY<br>HZ                                      | MILLIVOLT VALVE<br>ACT       |  |  |  |
|     | 770<br>804   |                              |  |  |  |
| 140 | COMBAT RATING RESET  |                              |  |  |  |
|     | ALTERNATOR<br>FREQUENCY<br>HZ                                      | T 5 VALUES<br>ACT            |  |  |  |

(CONTINUED)




|  |  |                                 |   |
|--|--|---------------------------------|---|
| *****                                      |  |                                 |   |
| CAEM08 * WORK CONTROL DOCUMENT * JC        |  | 1. DATE 88239 PAGE 3 OF 4 PAGES |   |
| 15. DISP-16. PDN/-                         |  |                                 |   |
| STATION/OP NO. 17. WORK TO BE ACCOMPLISHED |  | 18. MECH 19 "P" 20 "Q"          |   |
|  | 770  |                                 |   |
|  | 804  |                                 |   |
| 150  | CHECK RELATIONSHIP OF 15 FLATS.  | 2 m                             | n |
| 160  | ACCELERATION RESET RESPONSE TEST (PRE TEST)  | 4 m                             | n |
|  | FLN DISPLACEMENT ACT _____   |                                 |   |
| 170  | FREQUENCY RESPONSE TEST (PRE-TEST)   | 5 m                             | n |
| 180  | SPEED DERIVATIVE TEST (PRE-TEST)   | 1 m                             | n |
| 190  | OBTAIN THE POSITIVE & NEGATIVE OUTPUT MILLIAMPERE SWEEPS AT ALL THREE "LEFT" SETTINGS. |                                 | n |
|  | .1 CPS SWEEP ACT _____   | BA                              |   |
|  | .3 CPS SWEEP ACT _____   | BA                              |   |
|  | .5 CPS SWEEP ACT _____   | BA                              |   |
| 200  | SPEED DERIVATIVE RESPONSE TEST (PRE-TEST)  |                                 | n |
| 210  | HIGH TEMPERATURE TEST.   |                                 | n |
| 220  | COLD TEMPERATURE TEST.   |                                 | n |
| 230  | TROUBLESHOOT.  |                                 | n |
| 240  | IF ALL TESTS PASS MOVE TO STEP 25  |                                 | n |
| 250  | DISASSEMBLE AS REQUIRED.   | 500 m                           | n |
| 260  | CLEAN AS REQUIRED.   | 100 m                           | n |
| 270  | INSPECT AS DIRECTED.   |                                 | n |
|  | RESISTANCE ACT _____   | OHMS                            |   |
|  | TORQUE CHECK ACT _____   | 62/IN                           |   |
| 280  | REPAIR OR REPLACE AS REQUIRED.   |                                 | n |
| 290  | REASSEMBLE SUB-ASSY'S AS DIRECTED.   |                                 | n |
| 300  | REASSEMBLE COMPONENTS AS DIRECTED.   |                                 | n |



|     |  |              |
|-----|--|--------------|
| 310 | PERFORM FINAL ASSEMBLY AS DIRECTED.<br><i>2.75 - 30 min (on every unit)</i>  | <i>20/20</i> |
| 320 | FINAL INSPECTION & PERFORMANCE TESTS<br><i>1.5 IS the 1st (all 3)</i>  | <i>← M</i>   |
| 330 | COMPLETE & FORWARD AFIO 349 TO DATA PROCESSING.  | <i>← M 5</i> |
| 340 | I CERTIFY THAT THIS END ITEM HAS BEEN OVERHAULED IAW F.O., 1010, CURRENT REVISIONS, SUPPLEMENTS, AND APPLICABLE PROCESS ORDERS. OPERATIONS COMPLETE & PAPERWORK PROCESSED. | <i>← 2</i>   |
| 350 | COMPLY WITH MAGI 36-36, PARA 13 TYPE WORK PERFORMED  | <i>← G/</i>  |

*Hard copy*  
*500.2 units + 10*  
*ing er*





\*\*\*\*\*  
 2.CRID/PROD NR 13.QUANTITY 14.PROD SECTION/REC 15.DATE SCHED 16.DATE COMP  
 38669A 1 MIPCA 1 87094 1

7. PART NUMBER 19.ITEM SERIAL NR 18/12.TLCH DATA/OPTIONAL  
 10-353973-2 1 PU MAT00 16  
 801 2-36-13 85092H

10.MODEL/DESIGN/SERIES 11.STOCK NR 1 CHG 8  
 379 15/17 1 2925009921235PLI LARRY WACE

13.MISC 14.NOUN/END ITEM NOUN  
 1 IGNITION EXCITER PAU  
 PERRY/MATEAC/60920

15.DISP-16.FOR/  
 STATION/OT NO. 17.WORK TO BE ACCOMPLISHED 118.MECH 17" P 120" Q

| 010             | RECEIVE, IDENTIFY & ATTACH PAPERWORK  | n                 |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |   |
|-----------------|---|-------------------|-----------------------|-------------------|-----------------------|----|-------|-------|-----|----|-------|-------|-------|----|-------|-------|-----|---|
| 020             | ALL REFERENCES ARE TO THE BASIC T.O.<br>AND APPLICABLE PROCESS ORDERS, TECH<br>DATA CONTAINS DETAILED NOTES, CAUTIONS,<br>WARNINGS, DIMENSIONS, AND<br>TOLERANCES REQUIRING COMPLIANCE.   | n                 |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |   |
| 025             | ITEMS CONTAIN PRECIOUS METALS, OIL<br>AND 65 4 FOR PROCESSING & CONTROL.  | n                 |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |   |
| 030             | INSPECTION (VISUALLY)   | n                 |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |   |
| 035             | FUNCTIONAL TEST<br><table border="1"><thead><tr><th>APPLIED VOLTAGE</th><th>ACTUAL INPUT CURRENT</th><th>ACTUAL SPARK RATE</th><th>ACTUAL OUTPUT VOLTAGE</th></tr></thead><tbody><tr><td>14</td><td>-----</td><td>-----</td><td>N/A</td></tr><tr><td>24</td><td>-----</td><td>-----</td><td>-----</td></tr><tr><td>30</td><td>-----</td><td>-----</td><td>N/A</td></tr></tbody></table> | APPLIED VOLTAGE   | ACTUAL INPUT CURRENT  | ACTUAL SPARK RATE | ACTUAL OUTPUT VOLTAGE | 14 | ----- | ----- | N/A | 24 | ----- | ----- | ----- | 30 | ----- | ----- | N/A | n |
| APPLIED VOLTAGE | ACTUAL INPUT CURRENT  | ACTUAL SPARK RATE | ACTUAL OUTPUT VOLTAGE |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |   |
| 14              | -----   | -----             | N/A                   |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |   |
| 24              | -----   | -----             | -----                 |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |   |
| 30              | -----   | -----             | N/A                   |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |   |
| 040<br>MIPEM    | MOVE TO MACHINE SHOP TO REMOVE LID.   | n                 |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |   |
| 045             | DISASSEMBLE   | n                 |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |   |
| 050             | CLEAN AS REQUIRED.  | n                 |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |   |
| 055             | INSPECT AS REQUIRED.  | n                 |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |   |
| 060             | TEST-TUBE ASSEMBLY.   | n                 |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |   |

2 1 M

.2 1 m



| *****                                       |  |                                 |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |  |  |
|---|--|---------------------------------|-----------------------|-------------------|-----------------------|----|-------|-------|-----|----|-------|-------|-------|----|-------|-------|-----|--|--|
| CAEM03 * WORK CONTROL DOCUMENT * 30         |  | 1. DATE 80239 PAGE 2 OF 3 PAGES |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |  |  |
| 15. DISP-16. PDN/                           |  |                                 |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |  |  |
| STATION/OP NO. 117. WORK TO BE ACCOMPLISHED |  | 113. MECH 119"P" 120"Q"         |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |  |  |
| 065   | TEST SPARK GAP.<br>ACT _____ VDC .3 5 in   |                                 |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |  |  |
| 070   | TEST RESISTOR ASSEMBLY<br>RESISTANCE ACT _____ OHMS .2 5 in  |                                 |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |  |  |
| 075   | TEST TRANSFORMER VIBRATOR ASSEMBLY<br>RESISTANCE ACT _____ OHMS  |                                 |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |  |  |
| 080   | CAPACITOR ASSEMBLY<br>GREEN LEAD - WHITE A LEAD<br>ACT _____ MICROFARAD<br>YELLOW LEAD - WHITE B LEAD<br>ACT _____ MICROFARAD  |                                 |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |  |  |
| 085   | TEST FILTER ASSEMBLY<br>CONNECTOR INPUT PIN - HOUSING<br>ACT _____ MICROFARAD<br>* INSULATION RESISTANCE<br>CONNECTOR INPUT PIN - HOUSING<br>ACT _____ MEG<br>* 500 VOLT MEGGAR  |                                 |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |  |  |
| 090   | REPAIR OR REPLACE AS REQUIRED.   |                                 |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |  |  |
| 095   | REASSEMBLY   |                                 |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |  |  |
| 100   | TORQUE:<br>NUT (37) ACT _____ LB IN.<br>NUT (14) ACT _____ LB IN.<br>NUT (27) ACT _____ LB IN.<br>SCREW (19) ACT _____ LB IN.<br>PLUG (3) ACT _____ LB IN.   |                                 |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |  |  |
| 105   | TEST EXCITER ELECTRICALLY<br><table border="1"> <thead> <tr> <th>APPLIED VOLTAGE</th> <th>ACTUAL INPUT CURRENT</th> <th>ACTUAL SPARK RATE</th> <th>ACTUAL OUTPUT VOLTAGE</th> </tr> </thead> <tbody> <tr> <td>14</td> <td>_____</td> <td>_____</td> <td>N/A</td> </tr> <tr> <td>24</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>30</td> <td>_____</td> <td>_____</td> <td>N/A</td> </tr> </tbody> </table> | APPLIED VOLTAGE                 | ACTUAL INPUT CURRENT  | ACTUAL SPARK RATE | ACTUAL OUTPUT VOLTAGE | 14 | _____ | _____ | N/A | 24 | _____ | _____ | _____ | 30 | _____ | _____ | N/A |  |  |
| APPLIED VOLTAGE                             | ACTUAL INPUT CURRENT   | ACTUAL SPARK RATE               | ACTUAL OUTPUT VOLTAGE |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |  |  |
| 14  | _____  | _____                           | N/A                   |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |  |  |
| 24  | _____  | _____                           | _____                 |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |  |  |
| 30  | _____  | _____                           | N/A                   |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |  |  |
| 0-35  | 110 MOVE TO MPIW (WELDING SHOP) TO HAVE LID WELDED.  |                                 |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |  |  |
|   | 115 LEAK CHECK EXCITER.  |                                 |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |  |  |
|   | 120 EVACUATE AND PURGE EXCITER.  |                                 |                       |                   |                       |    |       |       |     |    |       |       |       |    |       |       |     |  |  |

even time -  
cool time 45.



|     |  |                      |                   |                       |
|-----|--|----------------------|-------------------|-----------------------|
| 123 | LEAK CHECK EXCITER (AROUND PLUG)<br>(USING THE WATER METHOD)   | M                    |                   |                       |
| 125 | PAINT  | M                    |                   |                       |
| 130 | TEST EXCITER   | M                    |                   |                       |
|     | APPLIED VOLTAGE  | ACTUAL INPUT CURRENT | ACTUAL SPARK RATE | ACTUAL OUTPUT VOLTAGE |
| 14  |  |                      |                   |                       |
| 24  |  |                      |                   |                       |
| 30  |  |                      |                   | N/A                   |
| 145 | EXCITER 10-353975 2 (RADIOACTIVE)<br>MAY BE REWORKED TO 10-353975 3<br>(NONRADIOACTIVE). IF DONE, REIDENTIFY TO 10-353975 3 OR (10605339753).<br>RADIOACTIVE STICKLER WILL NOT BE USED<br>IF REIDENTIFIED. | M                    |                   |                       |
| 150 | COMPLETE & FORWARD AFDO 349 TO DATA<br>PROCESSING.   | M                    |                   |                       |
| 155 | I CERTIFY THAT THIS END ITEM HAS<br>BEEN OVERHAULED IAW T.O., TOTO,<br>CURRENT REVISIONS, SUPPLEMENTS AND<br>APPLICABLE PROCESS ORDERS.  | M                    |                   |                       |
| 160 | OPERATIONS COMPLETE, PAPERWORK PRO-<br>CESSED.   | M                    |                   |                       |
| 165 | COMPLY WITH MADI 66-36, PARA 13<br>TYPE WORK PERFORMED   | M                    |                   |                       |

*Handwritten note:*  
10-353975 3  
of 10605339753  
2229rd.



| *****                            |   |                                |               |
|----------------------------------|---|--------------------------------|---------------|
| CAEM09 * WORK CONTROL DOCUMENT * |   | 1. DATE 0825 PAGE 1 OF 2 PAGES |               |
| *****                            |   |                                |               |
| 2. ORIG/PROD NR                  | 13. QUANTITY  | 14. PROD SECTION/RCC           | 15. DATE SCHD |
| 38694A                           |   | MTPCAP                         | 89094         |
| *****                            |   |                                |               |
| 7. ART NUMBER                    | 19. ITEM SERIAL NR  | 16/12. TECH DATA/OPTIONAL      |               |
| 317193-7                         |   | FD MATCO 13                    |               |
|                                  |   | 15L2 2 4/ 13                   |               |
| 10. MODEL/DESIGN/SERIES          | 11. STOCK NR  | CHD 12                         |               |
| 377 15/17                        | 2925009637064   |                                |               |
| *****                            |   |                                |               |
| 13. DISC                         | 14. NOON/LND TLM NOON   |                                |               |
|                                  | SOLENOID ASSY   | FACI                           |               |
| PERRY/HATLAC/65920               |   |                                |               |
| *****                            |   |                                |               |
| 15. DISP-16. PDN/                |   |                                |               |
| STATION/OP NR.                   | 17. WORK TO BE ACCOMPLISHED   | 18. RECH 17 "P" 12VDC          |               |
| 010                              | RECEIVE, IDENTIFY & ATTACH PAPERWORK  | n                              |               |
| 020                              | ALL REFERENCES ARE TO BASIC P.O. AND APPLICABLE PROCESS ORDERS. TECH DATA CONTAINS DETAILED NOTES, CAUTIONS, WARNINGS, DIMENSIONS, AND TOLERANCES REQUIRING COMPLIANCE. | n                              |               |
| 030                              | DISASSEMBLE SOLENOID ASSY.  | n                              |               |
| 040                              | REPLACE VALVE ASSY (22)   | n                              |               |
| 050                              | RECORD QUANTITY & THICKNESS OF WASHERS (16) FOR REASSEMBLY PURPOSES   | n                              |               |
| 060                              | RECORD QUANTITY & THICKNESS OF CHINS (25) AND WASHERS (26) FOR REASSEMBLY PURPOSES.   | n                              |               |
| 070                              | CLEAN PARTS AS REQUIRED.  | n                              |               |
| 080                              | INSPECT PARTS.  | n                              |               |
| 090                              | CHECK RESISTANCE ON COIL ASSEMBLY<br>ACT _____ OHMS AND _____ OHMS  | n                              |               |
| 100                              | PERFORM DIELECTRIC TEST.  | n                              |               |
| 110                              | REASSEMBLE SOLENOID ASSEMBLY  | n                              |               |
| 115                              | IF NEW PIN IS REQ. SEND ASSEMBLY TO MTPIW FOR WELDING.<br>REQ. _____ NOT REQ. _____   | n                              |               |
| 120                              | TEST AS REQUIRED.   | n                              |               |

3.74



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 CAEM02 \* WORK CONTROL DOCUMENT \* JC 1. DATE 80232 PAGE 2 OF 2 PAGES  
 10. DISC 18. PDN/  
 STATION OP NO. 117. WORK TO BE ACCOMPLISHED 118. RECT 19. 11. 20. 11. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

|     |  |   |
|-----|--|---|
| 130 | AFTO FORM 349 COMPLETED & FORWARDED TO DATA AUTOMATION.  | M |
| 140 | I CERTIFY THAT THIS END FILE HAS BEEN OVERHAULED IAW T.O. 1CTO'S, CURRENT REVISIONS, SUPPLEMENTS, AND APPLICABLE PROCESS ORDERS. | R |
| 150 | COMPLY WITH MAOD 80-06, PARA 13 TYPE WORK PERFORMED  | R |



| *****                               |   |                                 |                              |
|-------------------------------------|---|---------------------------------|------------------------------|
| CAEM02 * WORK CONTROL DOCUMENT * JC |   | 1. DATE 00239 PAGE 1 OF 3 PAGES |                              |
| *****                               |   |                                 |                              |
| 12. ORIG/PROD NR                    | 13. QUANTITY  | 14. PROD SECTION/REC            | 15. DATE SCHED 16. DATE COMP |
| 30710A                              | 1   | MTPCAP                          | 89024                        |
| *****                               |   |                                 |                              |
| 7. PART NUMBER                      | 19. ITEM SERIAL NR  | 10/12. TECH DATA/OPTIONAL       |                              |
| 10-397625-1                         | 1   | SEL 2-36 23 87032H              |                              |
|                                     |   | CHD 1                           |                              |
| 10. MODEL/DESIGN/SERIES             | 11. STOCK NR  | SEL 2-36 3 87121H               |                              |
| 377                                 | 2925011325027PL   | CHD 12                          |                              |
|                                     |   | SEL 2-36 306 88001H             |                              |
| 13. MISC                            | 14. ROOM/END ITEM NOON  | SEL 2-36 306L 88340H            |                              |
| IGNITION EXCITER (LOW SMOKE FAC)    |   | SEL 2-36 306L 84600H            |                              |
| FLYKY, DATEAD/05920                 |   | SEL 2-36 306H 88000H            |                              |
|                                     |   | SEL 2-36 306H 87000H            |                              |
| *****                               |   |                                 |                              |
| 13. DIOP-13-PDR/                    |   | DONALDA STROUD                  |                              |
| 17. WORK TO BE ACCOMPLISHED         | 18. FLCH 19. 11 120" 120"   |                                 |                              |
| F 10000781P3 2925007727904PL 30070A |   |                                 |                              |
| 010                                 | RECEIVE, IDENTIFY & ATTACH PAPERWORK  |                                 |                              |
| 020                                 | ALL REFERENCES ARE TO THE BASIC T.O. AND APPLICABLE PROCESS ORDERS. TECH DATA CONTAINS DETAILED NOTES, CAUTIONS, WARNINGS, DIMENSIONS, AND TOLERANCES REQUIRING COMPLIANCE. |                                 |                              |
| 020                                 | ITEMS CONTAIN PRECIOUS METALS; SEE MAGI 65-4 FOR PROCESSING & CONTROL.  |                                 |                              |
| 030                                 | RECEIVE EXCITER; REMOVE LED AND WELDS; RETURN TO MTPCA.   |                                 |                              |
| 040                                 | DISASSEMBLE   |                                 |                              |
| 050                                 | HOUSING ASSEMBLY, CHECK FLANGES MINIMUM HEIGHT<br>ACT: _____ INCH<br>REWORK IAW SEL 2-36 23 PARA 5-4.H. (6).<br><br>REWORK:<br>REQ _____ NOT REQ _____                      |                                 |                              |
| 060                                 | MILL HOUSING EDGE FOR HOUSING EXTENSION:<br>ACT: _____ INCH   |                                 |                              |
| 070                                 | WELD EXTENSION ON THE HOUSING   |                                 |                              |
| 080                                 | WELD BRACKETS AND STUDS TO MODIFIED HOUSING. WHEN FINISHED MTPIW WILL RETURN BOX TO MTPCA.  |                                 |                              |
| 090                                 | MTPCA WILL MODIFY EXCITER AS REQ. BY TOTO.  |                                 |                              |



|  |  |                                 |  |
|--|--|---------------------------------|--|
| *****                                      |  |                                 |  |
| CAEM02 * WORK CONTROL DOCUMENT * JC        |  | 1. DATE 00237 PAGE 2 OF 3 PAGES |  |
| 15.DIST-16.FDN/                            |  |                                 |  |
| STATION/OP NO. 117.WORK TO BE ACCOMPLISHED |  | 118.MECH 17" D 120" Q           |  |
| 100  | *TEST HOUSING AND TRANSFORMER ASSY. (60); MEASURE PRIMARY AND SECONDARY RESISTANCE.<br>GREENWIRE-WHITEWIRE_____ACT OHMS<br>BROWNWIRE-RED WIRE_____ACT OHMS<br>* OHMMETER   | M                               |  |
| 110  | *TEST ELECTRON TUBE ASSY. (20) (26)<br>INVERSE CURRENT FLOW_____ACT MA<br>OPERATING CURRENT_____ACT GA<br>* 11-8552 ELECTRON TUBE TEST OLT   | n                               |  |
| 120  | *TEST RESISTOR ASSY. (44)<br>RESISTANCE_____ACT OHMS<br>* OHMMETER   | n                               |  |
| 130  | FORMER VALUED:<br>SCREWS (58) 2_____ACT LB/INS<br>SCREW (52) 1_____ACT LB/INS<br>NUTS (52) 4_____ACT LB/INS<br>NUT (15) 1_____ACT LB/INS<br>SCREW (31) 2_____ACT LB/INS<br>SCREW (10) 2_____ACT LB/INS<br>NUT THREAD (13) 1_____ACT LB/INS                       | M                               |  |
| 140  | WHEN COMPRESSION CAPACITOR ASSEMBLY THROUGH FORCE GAUGE_____ACT LBS<br>OF FORCE WERE APPLIED.  | n                               |  |
| 145<br>MTPCM                               | CUP GOES TO MACH. SHOP TO BE CUT OFF AT SCRIBED LINE.  | n                               |  |
| 150<br>MTPW                                | THE BOX MAY HAVE TO GO TO MTPW AFTER ANY ONE PROCEDURE TO HAVE THE PLATE ON THE VIBRATOR ASSY. (51) WELDED TO THE PARTITION. AT THIS TIME THE FILTER ASSY. CONNECTOR AND CUP COULD BE WELDED TO THE HOUSING. EXCITER WILL THEN BE RETURNED TO MTPCA FOR TESTING. | n                               |  |
| 155 ASSY                                   |  |                                 |  |
| 160<br>MTPCA                               | EXCITER WILL BE TESTED IAW 8E1-2-36-3 EXCEPT FOR DIFFERENCES NOTED IN TCTO.  | n                               |  |
| 170  | "BEFORE" COVER TEST:<br>A/B<br>70 VAC_____ACT SPARK RATE (S/R)<br>115 VAC_____ACT S/R_____ACT OUTPUT<br>120 VAC_____ACT S/R<br><br>MAIN<br>14 VDC_____ACT S/R<br>24 VDC_____ACT S/R_____ACT OUTPUT<br>30 VDC_____ACT S/R   | n                               |  |
| 180<br>MTPW                                | FINISH PACKING EXCITER THEN SEND WITH COVER TO MTPW FOR<br>(CONTINUED)   | M                               |  |

DELATE &  
COMBINE  
WHERE USED

U-41

155 ASSY

COMBINE

ASS 175



|   |   |                       |  |
|---|---|-----------------------|--|
| *****                                       |   | *****                 |  |
| CAMPO2 WORK CONTROL DOCUMENT & JC           |   | 1. DATE 08237         |  |
| 11. DISC 16. PDN/-                          |   | 12. 3 04 3 PARADIS    |  |
| STATION/OP NO. 117. WORK TO BE ACCOMPLISHED |   | 118. MECH 12777120117 |  |
|   | WELDING OF COVER TO HOUSING. MTPIW<br>WILL SEND BACK TO MTPCA   |                       |  |
| 190<br>MTPCA                                | TEST FOR LEAKAGE, EVACUATE, AND<br>PURGE IAW 8E1 2-36-3.  | M                     |  |
| 195   | TORQUE PLUG (13):<br>ACT: _____ IN/LB   | M                     |  |
| 200   | TEST EXCITER "AFTER" TEST<br>A/B  | R                     |  |
|   | 90 VAC _____ ACT 5/R<br>115 VAC _____ ACT 5/R _____ ACT OUTPUT<br>120 VAC _____ ACT 5/R   |                       |  |
|   | MAIN<br>14 VDC _____ ACT 5/R<br>24 VDC _____ ACT 5/R _____ ACT OUTPUT<br>30 VDC _____ ACT 5/R   |                       |  |
| 210   | TEST USING 11-4700-1 TESTER AND<br>11-9600 SPARK GAP ASSY. TESTER.<br>24 VOLTS DC INPUT<br>ACT: G/L FIRED<br>FIRING STOPS<br>ACT: KR  | R                     |  |
| 220   | CLEAN AS REQUIRED   | R                     |  |
| 230   | PAINT AS REQUIRED   | R                     |  |
| 240   | MARK NEW PART NUMBER 10 397625 1<br>(GE 10605281P5), A LETTER R IN REV<br>BLOCK, AND ORIGINAL SERIAL NUMBER,<br>CURRENT, VOLTAGE, AND TYPE LETTERS<br>ON NEW IDENT. PLATE. DO NOT APPLY<br>RADIOACTIVE WARNING PLATE AS WARNING<br>NO LONGER APPLIES. (AS PER TCTO)<br>INSTALL IDENT. PLATES. | R                     |  |
| 250   | I CERTIFY THAT THIS END ITEM HAS<br>BEEN OVERHAULED IAW T.O., TCTO,<br>CURRENT REVISIONS, SUPPLEMENTS, AND<br>APPLICABLE PROCESS ORDERS.  | M                     |  |
| 260   | OPERATIONS COMPLETED & PAPERWORK<br>FORWARDED.  | M                     |  |
| 270   | COMPLY WITH MAD1 66-36, PARA 13<br>TYPE WORK PERFORMED _____  | M                     |  |



\*-----\*\*\*\*\*  
 1 CAEC07 \* WORK CONTROL DOCUMENT \* 72-10 1.DATE 89045 PAGE 1 OF 3 PAGES.  
 \*-----\*\*\*\*\*

12.Orig/PROD NR 13.QUANTITY 14.PROD SECTION/RCD 15.DATE SCHED 16.DATE COMP  
 | | | MIPCAI | 89094 |

7..ART NUMBER 19.ITEM SERIAL NR 18/12.TECH DATA/OPTIONAL  
 | | | PO MAT87-16  
 | | | PO MAT87-1  
 10.MODEL/DESIGN/SERIES 11.STOCK NR 1 PO MAT87-3  
 | 7133 3/11A | 292500773/217RV | 011-2-22-103 88300H  
 | | | CNO 20  
 13.MISC 14.NOUN/LRD ITEM NOUN 1 011-2-22-103 1 79210H  
 | | IGNITION EXCITER PAUL LADY WARE  
 | | JENNINGS/MATEAC/65720

15.DISP-16.PDR/ STATION/NO. 17.WORK TO BE ACCOMPLISHED 18.MECH 17"1"120"6"

| P/N 378205  
 | P/N 10-187860-1  
 | MTH9A 98001(A) (1)  
 | C/N 49711A  
 | P/N 10 617860 1  
 | (SUPERCEDES 10-187860-1)  
 | S/N 2925011318761RV

W-43 010 RECEIVED, IDENTITY & ATCH PAPERWORK.

015 ALL REFERENCES ARE TO THE BASIC T.O.  
 AND APPLICABLE PROCESS ORDERS. TECH  
 DATA CONTAINS DETAILED NOTES,  
 CAUTIONS, WARNINGS, DIMENSIONS AND  
 TOLERANCES REQUIRING COMPLIANCE.

TC 57 → V-41 020 MOVE TO MACHINE SHOP & REMOVE LID.

030 DISASSEMBLE.

040 CLEAN AS REQUIRED.

050 INSPECT.

051 INSPECT HOUSING ASSEMBLY HEIGHT  
 ACT \_\_\_\_\_ INCH.  
 REPLACED NEW YES \_\_\_\_\_ NO \_\_\_\_\_  
 REPAIR REQ \_\_\_\_\_ NOT REQ \_\_\_\_\_

W-41 055 MOVE UNDERSIZE HOUSINGS TO WELDING  
 MTPCA FOR EXTENSION STRIPS

060 MEASURE RESISTANCE AT FILTER, BE-  
 TWEEN INPUT PIN & OUTPUT LEAD.  
 .  
 ACTUAL \_\_\_\_\_ OHMS  
 \*OHMMETER

0-35 070 WELD FILTER AND CONNECTORS.

MPIW

(CONTINUED)



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 CAEC07 \* WORK CONTROL DOCUMENT \* 72-10 1.DATE 82048 PAGE 2 OF 3 PAGES  
 15.DISP-16.PDN/  
 STATION/OP NO. 117.WORK TO BE ACCOMPLISHED 118.MECH 119.TM 120.UM

|     | REQ:   | NOT REQ: |   |      |
|-----|--|----------|---|------|
| 080 | MEASURE CAPACITANCE BETWEEN INPUT<br>PIN & HSG.  |          | M |      |
|     | ACT _____ UF<br>*CAPACITOR ANALYZER*   |          |   |      |
| 090 | CHECK INSULATION RESISTANCE BETWEEN<br>INPUT PIN & FILTER HOUSING BY APPLY<br>ING 400 VDC. INSULATION RESISTANCE |          | M |      |
|     | ACT _____ MEGOHMS<br>*400 VOLT MEGGER*   |          |   | 5507 |
| 100 | (TRANSFORMER) MEASURE PRIMARY RESIS-<br>TANCE BETWEEN BLACK LEAD & GREEN<br>LEAD.                                |          | M |      |
|     | ACT _____ OHM<br>*OHMMETER*  |          |   |      |
| 110 | MEASURE SECONDARY RESISTANCE BETWEEN<br>WHITE & RED LEAD OF TRANSFORMER.   |          | M |      |
|     | ACT _____ OHM  |          |   |      |
| 120 | CHECK CAPACITANCE OF CAPACITOR,<br>P/N 10-107202   |          | M |      |
|     | *CAPACITOR ANALYZER* ACT: _____ UF   |          |   |      |
| 130 | CAPACITANCE BETWEEN NO 1 LEAD AND<br>GROUND  |          | M |      |
|     | ACT _____ UF   |          |   |      |
| 140 | CAPACITANCE BETWEEN NO 2 LEAD AND<br>GROUND  |          | M |      |
|     | ACT _____ UF   |          |   |      |
| 150 | CAPACITANCE BETWEEN NO 3 & 5 LEAD  |          | M |      |
|     | ACT _____ UF   |          |   |      |
| 160 | CAPACITANCE BETWEEN NO 4 & 5 LEAD  |          | M |      |
|     | ACT _____ UF   |          |   |      |
| 170 | APPLIED VOLTAGE BETWEEN NO 1 LEAD<br>& GROUND  |          | M |      |
|     | ACT _____ VDC  |          |   |      |
|     | APPLIED VOLTAGE BETWEEN NO 2 LEAD<br>& GROUND  |          |   |      |
|     | ACT _____ VDC  |          |   |      |
|     | APPLIED VOLTAGE BETWEEN NO 3 & 5<br>LEAD   |          |   |      |
|     | ACT _____ VDC  |          |   |      |
|     | APPLIED VOLTAGE BETWEEN NO 4 & 5<br>LEAD   |          |   |      |
|     | ACT _____ VDC  |          |   |      |

(CONTINUED)



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| CALC07 * WORK CONTROL DOCUMENT * 72-10 1.DATE 07/04/75 PAGE 2 OF 5 PAGES |   |                      |                       |
| 15.DISC 16.PDN/  |   |                      |                       |
| STATION/OP NO.   | 17.WORK TO BE ACCOMPLISHED  | 18.RECHARGE LOCATION |                       |
|  | THERE SHALL BE NO VOLTAGE BRK ON OR FLASHOVER OF ANY SECTION DURING A 15 SECOND PERIOD OF APPLIED VOLTAGE.  |                      |                       |
|  | *JET IGNITION COMPONENT SETS  |                      |                       |
| 180  | MEASURE RESISTANCE OF RESISTOR (6) & RESISTORS (7) WHICH TOGETHER MAKE UP RESISTOR ASSY. RESISTANCE READING FOR RESISTOR (6)<br>APPL _____ ALCOHOL<br>RESISTANCE READING FOR RESISTORS (7)<br>. . . . .<br>AMMETERS | M                    |                       |
| 190  | VOLTAGE BREAKDOWN FOR SPARK GAP TEST<br>. . . . .<br>APPL _____ VDC<br>JET IGNITION COMPONENT TEST SETS   | M                    |                       |
| 210  | CHECK RECTIFIER ASSEMBLY FOR CONTINUITY OF RECTIFIERS.<br>. . . . .<br>ELECTRON TUBE TEST SETS  | M                    |                       |
| 200  | CHECK COIL FOR CONTINUITY BETWEEN EA TERMINAL & THE CONTACT PIN IN THE OUTLET.<br>. . . . .<br>AMMETERS   | M                    | Adap. 105<br>from 105 |
| 210  | REPAIR OR REPLACE AS NECESSARY VIBRATOR SHALL BE REPLACED AT EACH IGNITION EXCITER OVERHAUL.  | M                    | 3953                  |
| 230  | REASSEMBLE  | M                    |                       |
| 240  | VACUUM DRY IGN EXCITER FOR PERIOD OF 4 HRS AT 170 DEG F AT ONE INCH HG CURY ABSOLUTE PRESS MAX.   | M                    |                       |
| 250  | FILL CAPACITOR ASSEMBLY COMPARTMENT WITH RESIN.   | M                    |                       |
| 260  | BAKE IGNITION EXCITER AS FOLLOWS:<br>. . . . .<br>200 DEG F/1 HR.<br>. . . . .<br>240 DEG F/1 HR.<br>. . . . .<br>300 DEG F/2 HRS.  | M                    |                       |
| 270  | MOVE TO WELDING SHOP & WELD LID TO EXCITER & PERFORM LEAK TEST.   | M                    | (2-1-1)               |
| 300  | CLOSE VACUUM LINE & PRESSURIZE IGNITION EXCITER TO 15 PSI GAGE WITH DRY AIR OR NITROGEN HAVING A DLW  | M                    |                       |
| (CONTINUED)  |   |                      |                       |



| *****  |              |  |                        |
|--|--------------|--|------------------------|
| CAEC07 * WORK CONTROL DOCUMENT * 72-10 1. DATE 87045 PAGE 4 OF 5 PAGES |              |  |                        |
| 15. DISP-16. PDN/  |              |  |                        |
| STATION/OP NO.   |              | 17. WORK TO BE ACCOMPLISHED  | 18. MECH 119"P" 120"Q" |
|  |              | POINT OF 35 DEG F. OR BELOW  |                        |
| W-41   | 310<br>MIPIA | PAINT<br>REQ _____ NOT REQ _____   | M                      |
| WW-41  | 320<br>MIPIA | PAINT IGNITION EXCITER. APPLY LAC-<br>QUER. FLD SPEC TT-L 327 TO A FILM<br>THICKNESS OF<br>ACT _____ INCH  | M                      |
|  | 330<br>MIPIA | ALLOW TO DRY FOR 40 MINUTES IN DUST-<br>FREE ATMOSPHERE. IF PAINT BLISTERS,<br>STRIP POROUS AREA. CLEAN & REPAINT.   | M                      |
|  | 340          | TEST: CHECK CONTINUITY BETWEEN TWO<br>OUTPUT TERMINALS OF IGN. EXCITER.<br>-SHUNTER FLK  | M                      |
|  | 350          | TEST: APPLIED VOLTAGE (VDC) 14.0<br>INPUT CURRENT<br>SPARK RATE (PER SECOND)<br>OUTPUT VOLTAGE (VOLTS)<br>ACT _____ VOLTS<br>ACT _____ AMPS<br>ACT _____ S/R<br>APPLIED VOLTAGE 24<br>INPUT CURRENT<br>SPARK RATE<br>OUTPUT VOLTAGE<br>ACT: _____ AMPS MAX<br>ACT: _____ S/R<br>ACT: _____ VOLTS<br>APPLIED VOLTAGE 30<br>INPUT CURRENT<br>SPARK RATE<br>OUTPUT VOLTAGE<br>ACT _____ VDC<br>ACT: _____ VOLTS<br>ACT: _____ AMPS MAX.<br>ACT: _____ S/R | M                      |
|  | 360          | AFTO 349 COMPLETE & FORWARDED TO<br>DATA AUTOMATION.   | M                      |
|  | 370          | I CERTIFY THAT THIS END ITEM HAS<br>BLEN OVERHAULED IAW T.O., TOTO,<br>CURRENT REVISIONS, SUPPLEMENTS AND<br>APPLICABLE PROCESS ORDLRS.  | M                      |
|  | 380          | OPERATIONS COMPLETED AND PAPERWORK<br>PROCESSED  | M                      |

3906

or 4189



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15.DISP-16.FDN/

STATIONIDP NO. 117.WORK TO BE ACCOMPLISHED

118.MECH 19"P 120"Q

385

COMPLY WITH MAOI 66-66, PARA 13

M

TYPE WORK PERFORMED \_\_\_\_\_







|   |  |                           |                          |  |  |
|---|--|---------------------------|--------------------------|--|--|
| *****                                       |  |                           | *****                    |  |  |
| CAEZOS * WORK CONTROL DOCUMENT * 00         |  |                           | 1. DATE 00204            |  |  |
| 15. DISC 10. FDN/                           |  |                           | PAGE 2 OF 3 PAGES        |  |  |
| STATION/OP NO. 117. WORK TO BE ACCOMPLISHED |  |                           | 118. MECH 19 "P" 120 "H" |  |  |
|   |  | AND/OR ELECTRICAL REPAIR. |                          |  |  |
| 040   | DISASSEMBLE.   |                           | → 45 min                 |  |  |
| 050   | CLEAN AS REQUIRED.   |                           | → 1 hr                   |  |  |
| 060   | INSPECT.   |                           |                          |  |  |
| 070   | CHECK COMPONENTS PARTS AS NECESSARY.   |                           | Test Equip? 3952         |  |  |
| 200   | REPAIR OR REPLACE AS NECESSARY.  |                           | OC*                      |  |  |
| 200   | IF REQUIRED: ROUTE HOUSING P/N 10-303741 & COVER P/N 10-301301 FOR PLATING.  |                           |                          |  |  |
|   | REQ NOT REQ  |                           |                          |  |  |
| 301   | ENSURE DEPTH OF CONTACT HEAD IN INSULATOR SHELL (107) IS 0.375.  |                           |                          |  |  |
|   | ACTUAL INCH  |                           |                          |  |  |
| 302   | APPLY AN EVEN COATING OF RTV SHEET GUN RUBBER ADHESIVE. ALLOW ASSEMBLY TO CURE FOR 24 HRS AIR AT ROOM TEMP.  |                           |                          |  |  |
| 370   | REASSEMBLE.  |                           |                          |  |  |
| 375   | SOLDER EXCITER.  |                           |                          |  |  |
| 310   | PRESSURIZE EXCITER WITH 15 PSI NITROGEN. SUBMERSE EXCITER IN WATER HEATED TO A MINIMUM OF 120 DEG F. WITH SUFFICIENT AMOUNT OF WELDING AGENT. FOR MINIMUM OF 1 HOUR. |                           |                          |  |  |
| 370   | CLOSE OVEN AND HEAT IGNITION EXCITER TO 210 DEG F TO 230 DEG F FOR 1/2 HR.   |                           |                          |  |  |
| 380   | EVACUATE IGNITION EXCITER TO 1 INCH MERCURY & CONTINUE BAKING FOR 4 TO 12 HRS MINIMUM.   |                           |                          |  |  |
| 390   | CLOSE VACUUM LINE & PRESSURIZE IGNITION EXCITER TO 15 PSIG WITH DRY AIR OR NITROGEN HAVING A DEW POINT OF -65 DEG F.   |                           |                          |  |  |
| 400   | REMOVE IGNITION EXCITER WITH STOP- COCK FROM OVEN & ALLOW TO COOL TO   |                           |                          |  |  |
| (CONTINUED)                                 |  |                           |                          |  |  |











... ..

303

TEST OF ...  
ACT

371

RESISTANCE

1

2

1

2

5

45

... ..  
... ..  
... ..



303

dry N<sub>2</sub>

over







\*\*\*\*\*  
 CAEC05 \* WORK CONTROL DOCUMENT \* JC 1.DAIE 89045 PAGE 1 OF 7 PAGES  
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 12.ORIG/PROD NR 13.QUANTITY 14.PROD SECTION/RCC 15.DATE SCHED 16.DATE COMP  
 612341 MTPCAP 89121

| PART NUMBER            | 19.ITEM SERIAL NR   | 18/12.TECH DATA/OPTIONAL   |
|------------------------|---|--|
| 41540 (M)              |   | PO MAT87-3<br>PO MAT87-16  |
| 10.MODEL/DESIGN/SERIES | 11.STOCK NR   | 86135H   |
| TF33-5/9               | 2925004637319RV   | CHG 10   |
| 13.MISC                | 14.NOUN/END ITEM NOUN   | 8E1-8-9-3-1 78152H   |
|                        | IGNITION EXCITER  | CHG 3  |
|                        | JENNINGS/MATEAC/65920   | PACI   |
| 15.DISP-16.PDN/        |   |  |
| STATION/OP NO.         | 17.WORK TO BE ACCOMPLISHED  | 18.MECH 19"P" 20"Q"  |
|                        | 61234A 2925-01-011-2325RV 42721<br>(TF33 P5/7)  |  |
|                        | NOTE<br>MODIFY ABOVE P/N EXCITER ASSEMBLIES<br>IAW I.O. 8E1-8-9-3-1 (OVERHAUL<br>CONFIGURATION CHANGE DATA) |  |
| W-43                   | 010   | RECEIVE, IDENTIFY & ATTACH PAPERWORK   |
|                        | 015   | ALL REFERENCES ARE TO THE BASIC I.O.<br>& APPLICABLE PROCESS ORDERS. TECH<br>DATA CONTAINS DETAILED NOTES,<br>CAUTIONS, WARNINGS, DIMENSIONS &<br>TOLERANCES REQUIRING COMPLIANCE.     |
|                        | 020   | DISASSEMBLE. <i>Transformer change 4.5 hrs</i>   |
|                        | 030   | <del>CLEAN AS REQUIRED</del>   |
|                        | 040   | INSPECT AS REQUIRED.   |
|                        | 045   | <del>ROUTE COVER/CASE TO PLATING AS REQ</del>  |
|                        | 050   | CAPACITOR TEST: TRIGGER CAPACITOR,<br>APPLY 5000VDC BETWEEN CAPACITOR TER-<br>MINAL & GROUND FOR NOT MORE THAN 30<br>SECONDS. LEAKAGE.<br>ACTUAL MICROAMP.<br>*CAPACITOR BRIDGE TESTER |
|                        | 060   | CHECK CAPACITANCE.<br>ACTUAL UF  |
|                        | 070   | TEST BREAKER CAPACITOR BY APPLYING<br>600VDC BEIWN TERMINAL & GROUND FOR<br>NOT MORE THAN 30 SECONDS.  |

(CONTINUED)



|     |   |          |  |  |  |
|-----|---|----------|--|--|--|
|     | ACTUAL  | MICROAMP |  |  |  |
| 080 | CHECK CAPACITANCE.  |          |  |  |  |
|     | ACTUAL  | UF       |  |  |  |
| 090 | TEST 3 STORAGE CAPACITORS AS A CON-<br>NECTED GROUP. APPLY 4000VDC BETWN<br>FREE END ON INTER-CONNECT LEAD &<br>GROUND ON CASE. LEAKAGE |          |  |  |  |
|     | ACTUAL  | MICROAMP |  |  |  |
| 100 | CHECK CAPACITANCE AT SAME TERMINAL  |          |  |  |  |
|     | ACTUAL  | UF       |  |  |  |
| 110 | FILTER TEST: APPLY 300 VDC BETWN "B"<br>PIN & GROUND FOR NO MORE THAN 30 SEC<br>THERE MUST BE NO SIGN OF BREAKDOWN.                     |          |  |  |  |
| 120 | CHECK LEAKAGE BETWEEN EITHER<br>TERMINAL AND CASE:  |          |  |  |  |
|     | ACTUAL  | MEGOHMS  |  |  |  |
|     | *VACUUMTUBE VOLTMETER   |          |  |  |  |
| 130 | CAPACITANCE.  |          |  |  |  |
|     | ACTUAL  | UF       |  |  |  |
|     | *CAPACITOR BRIDGE TESTER  |          |  |  |  |
| 140 | RESISTOR TEST (29): MEASURE RESIST-<br>ANCE BETWN UPPER TERMINAL OF RESIST-<br>OR LEAD & CASE.  |          |  |  |  |
|     | ACTUAL  | OHMS     |  |  |  |
|     | *VACUUMTUBE VOLTMETER   |          |  |  |  |
| 150 | TEST EACH RESISTOR INDIVIDUALLY.  |          |  |  |  |
|     | ACTUAL  | OHMS     |  |  |  |
|     | ACTUAL  | OHMS     |  |  |  |
| 160 | TEST RESISTOR ASSY (45) MEASURE RE-<br>SISTANCE BETWEEN RESISTOR LEADS.   |          |  |  |  |
|     | ACTUAL  | MEGOHMS  |  |  |  |
| 170 | TEST EACH RESISTOR INDIVIDUALLY;<br>MEASURE RESISTANCE BETWN RESISTOR<br>TERMINALS.   |          |  |  |  |

(CONTINUED)







|  |  |        |      |        |                                 |  |  |  |  |
|--|--|--------|------|--------|---------------------------------|--|--|--|--|
| *****                                      |  |        |      |        |                                 |  |  |  |  |
| CAECOS * WORK CONTROL DOCUMENT * JC        |  |        |      |        | 1. DATE 89045 PAGE 4 OF 7 PAGES |  |  |  |  |
| 15. DISP-16. PDN/                          |  |        |      |        |                                 |  |  |  |  |
| STATION/OP NO. 17. WORK TO BE ACCOMPLISHED |  |        |      |        | 18. MECH 19" P" 20" Q"          |  |  |  |  |
|  |  | ACT    |      | VOLTS  |                                 |  |  |  |  |
|  |  | ACTUAL | AMP  | ACTUAL | AMP                             |  |  |  |  |
| 230  | DISCHARGER TUBE TEST: RAISE VOLTAGE SOURCE SLOWLY TO MAX OF 5000V. IF TUBE BREAKS DOWN AT LEVEL BELOW 4100 VOLTS, REPLACE. IF IT BREAKS DOWN BETWN 4100 & 5000V, OR IF IT DOES NOT BREAK DOWN AT ALL, IT IS A GOOD TUBE. |        |      |        | M                               |  |  |  |  |
|  | REPLACED   |        |      |        |                                 |  |  |  |  |
|  | NOT REPLACED   |        |      |        |                                 |  |  |  |  |
|  | *TEST FIXTURE  |        |      |        |                                 |  |  |  |  |
| 240  | READ VOLTAGE OVER A PERIOD OF 30 SECONDS.  |        |      |        | M                               |  |  |  |  |
|  | ACTUAL   |        |      | VOLTS  |                                 |  |  |  |  |
| 250  | HIGH TENSION TRANSFORMER TEST: CHECK RESISTANCE BETWN THE 2 TERMINALS TO WHICH PRIMARY LEADS ARE ATTACHED.   |        |      |        | M                               |  |  |  |  |
|  | ACTUAL   |        |      | OHM    |                                 |  |  |  |  |
|  | *OHMMETER  |        |      |        |                                 |  |  |  |  |
| 260  | ADJUST FOR GAP & INTERNAL PRESSURE.  |        |      |        | M                               |  |  |  |  |
|  | ACTUAL   |        | INCH | ACTUAL | PSIG                            |  |  |  |  |
|  | *IGNITION OUTPUT TESTER  |        |      |        |                                 |  |  |  |  |
| 270  | REPAIR OR REPLACE AS NECESSARY.  |        |      |        | M                               |  |  |  |  |
| 280  | TO CLINCH KNURLED FLANGE TO CASE, TORQUE A NUT AGAINST OUTER WALL OF CASE.   |        |      |        | M                               |  |  |  |  |
|  | ACTUAL   |        |      | IN/LB  |                                 |  |  |  |  |
|  | *TORQUE WRENCH.  |        |      |        |                                 |  |  |  |  |
| 300  | FALL SCREWS & LOCKNUTS SHOULD BE TORQUED.  |        |      |        | M                               |  |  |  |  |
|  | ACTUAL   |        |      | IN/LB  |                                 |  |  |  |  |
|  | *TORQUE WRENCH   |        |      |        |                                 |  |  |  |  |
| 310  | TEST IAW T.O. 8E1-3-2-3, PARA 2-36 SUB PARA "A"  |        |      |        | M                               |  |  |  |  |
|  | *TEST FIXTURE  |        |      |        |                                 |  |  |  |  |
| 340  | RAISE TRANSIFIER VOLTAGE REGULATOR UNTIL WAVE FORM DISPLAYED ON VOLTA-SCOPE SHOWS FIRST PEAK.  |        |      |        | M                               |  |  |  |  |
|  | ACTUAL   |        |      | VOLTS  |                                 |  |  |  |  |



15.DISP-16.FDN/

STATION/OP NO. 17.WORK TO BE ACCOMPLISHED 18.MECH 19"P" 20"Q"

|     |  |   |    |  |
|-----|--|---|----|--|
| 350 | THE FIRST HALF CYCLE SHOULD BE NEGATIVE & MUST SHOW AT LEAST 2 POSITIVE PEAKS & 2 NEGATIVE PEAKS WITHIN THE PERIOD OF 1 MILLISECOND. | M |    |  |
|     | *TEST FIXTURE  |   |    |  |
| 360 | REASSEMBLE.  | M |    |  |
| 370 | TEST STORAGE CAPACITOR; RAISE INPUT VOLTAGE TO 14V FOR NO MORE THAN 10 SECONDS. VALUE  | M |    |  |
|     | ACTUAL VOLT  |   |    |  |
|     | *VOLTASCOPE  |   |    |  |
| 380 | TEST:<br>INPUT VOLTAGE<br>INPUT CURRENT<br>SPARK RATE  | M |    |  |
|     | ACTUAL AMP ACTUAL SR   |   |    |  |
|     | INPUT VOLTAGE<br>INPUT CURRENT<br>SPARK RATE   |   | 24 |  |
|     | ACTUAL AMP ACTUAL SR   |   |    |  |
|     | INPUT VOLTAGE<br>INPUT CURRENT<br>SPARK RATE   |   | 29 |  |
|     | ACTUAL AMP ACTUAL SR   |   |    |  |
| 390 | TIGHTEN HEX NUTS AT INPUT END, LARGE NUT SHOULD BE TORQUED & THE 2 SMALLER NUTS.   | M |    |  |
|     | ACTUAL AMP ACTUAL IN/LB  |   |    |  |
|     | *TORQUE WRENCH   |   |    |  |
| 400 | SOLDER UNIT.   | M |    |  |
| 410 | TEST EXCITER FOR LEAKS USING A PROBE WITH 14 PSIG. LEAKAGE.  | M |    |  |
|     | ACTUAL CC  |   |    |  |
|     | *VEECO LEAK DETECTOR   |   |    |  |
| 420 | SUBMERGE EXCITER IN WATER HEATED TO MINIMUM OF 49 DEG C (120 DEG F) FOR  | M |    |  |
|     | (CONTINUED)  |   |    |  |



| *****                               |     |  |  |  |  |          |  |        |        |
|-------------------------------------|-----|--|--|--|--|----------|--|--------|--------|
| CAEC05 * WORK CONTROL DOCUMENT * JC |     | 1. DATE 89045 PAGE 6 OF 7 PAGES  |  |  |  |          |  |        |        |
| 15. DISP-16. PDN/                   |     |  |  |  |  |          |  |        |        |
| STATION/OP NO.                      |     | 17. WORK TO BE ACCOMPLISHED  |  |  |  | 18. MECH |  | 19 "P" | 20 "Q" |
|                                     |     | 1 MINUTE.  |  |  |  |          |  |        |        |
|                                     | 430 | GAS CHARGING: BAKE EXCITER 15 MIN. AT 275 DEG F. THEN TURN ON VACUUM PUMP SWITCH & EXHAUST EXCITER WHILE CONTINUING TO BAKE FOR ADDITIONAL 15 MINUTES. |  |  |  | M        |  |        |        |
| W-41                                | 440 | PAINT.   |  |  |  | M        |  |        |        |
|                                     | 450 | BAKE IN OVEN FOR 1 HR AT A TEMP OF 250 DEG F. OR AIR DRY.  |  |  |  | M        |  |        |        |
|                                     | 460 | TEST: SET MICROMETER UNTIL SCALE READING INDICATES SPARK GAP OF 0.100 INCH. ADJUST NITROGEN INLET UNTIL GAGE HOLDS STEADY.                             |  |  |  | M        |  |        |        |
|                                     |     | ACTUAL PSIG<br>*IGNITION OUTPUT TESTER   |  |  |  |          |  |        |        |
|                                     | 470 | TEST:<br>INPUT VOLTAGE<br>INPUT CURRENT<br>SPARK RATE  |  |  |  | M        |  |        |        |
|                                     |     | ACTUAL AMP<br>ACTUAL PER 10 SEC  |  |  |  |          |  |        |        |
|                                     |     | INPUT VOLTAGE<br>INPUT CURRENT<br>SPARK RATE   |  |  |  |          |  |        |        |
|                                     |     | ACTUAL AMP<br>ACTUAL PER 10 SEC  |  |  |  |          |  |        |        |
|                                     |     | INPUT VOLTAGE<br>INPUT CURRENT<br>SPARK RATE   |  |  |  |          |  |        |        |
|                                     | 490 | APPLY 24V INPUT CURRENT. OBTAIN ONE (1) OF THE FOLLOWING:<br>METER READING   |  |  |  | M        |  |        |        |
|                                     |     | 72.5   |  |  |  |          |  |        |        |
|                                     |     | 78.0   |  |  |  |          |  |        |        |
|                                     |     | 83.0   |  |  |  |          |  |        |        |
|                                     |     | 87.5   |  |  |  |          |  |        |        |
|                                     |     | 91.5   |  |  |  |          |  |        |        |
|                                     |     | ACTUAL   |  |  |  |          |  |        |        |







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 CAEB09 \* WORK CONTROL DOCUMENT \* JC 1.DATE 89033 PAGE 1 OF 4 PAGES  
 \*\*\*\*\*  
 12.ORD/PRG NR 13.QUANTITY 14.PROD SECTION/RCC 15.DATE SCHED 16.DATE COMP  
 97133A MTPCAJ 89131

PART NUMBER 19.ITEM SERIAL NR 18/12.TECH DATA/OPTIONAL  
 AV11A1134 PO MAT87-3  
 6J15-9-19-3 84245H  
 10.MODEL/DESIGN/SERIES 11.STOCK NR 12.CHG 1  
 J 57 4810002041575RV  
 13.MISC 14.NOUN/END ITEM NOUN  
 ELECTROMAG 3 WAY SELECT VLVPACI  
 JENNINGS/MATAC/65920  
 15.DISP 16.PDN/

STATION/OP NO. 17.WORK TO BE ACCOMPLISHED 18.MECH 19"120"Q"

|      |     |  |   |
|------|-----|--|---|
| W 43 | 010 | RECEIVE, IDENTIFY AND ATTACH PAPERWORK.  | M |
|      | 015 | ALL REFERENCES ARE TO THE BASIC T.O. & APPLICABLE PROCESS ORDERS. TECH DATA CONTAINS DETAILED NOTES, CAUTIONS, WARNINGS, DIMENSIONS & TOLERANCES REQUIRING COMPLIANCE. | M |
|      | 020 | DISASSEMBLE.   | M |
|      | 030 | CLEAN AS REQUIRED.   | M |
|      | 040 | INSPECT.   | M |
|      | 045 | INSPECT SPRINGS FOR CRACKS USING FED SPEC MIL-I-3058A.   | M |
|      | 050 | INSPECT SPRING (12)<br>O.D.<br>ACT: INCH<br>HEIGHT<br>ACT: INCH<br>LOAD<br>ACT: LBS<br>UNCOMPRESSED.<br>HEIGHT<br>ACT: INCH<br>LOAD<br>ACT: LBS                        | M |
|      | 060 | INSPECT SPRING (5).<br>O.D.<br>ACT: INCH<br>WORKING<br>HEIGHT<br>ACT: INCH<br>LOAD<br>ACT: LBS<br>COMPRESSED.<br>HEIGHT<br>ACT: INCH                                   | M |

(CONTINUED)



| 15. DISP-16. PDN/ |  | 17. WORK TO BE ACCOMPLISHED  |  | 18. MECH 19 "P" 20 "U" |  |
|-------------------|--|--|--|------------------------|--|
|                   |  | LOAD   |  |                        |  |
|                   |  | ACT: LBS   |  |                        |  |
| 070               |  | TEST ELECTROMAGNET COIL:<br>APPLY 1000 VOLTS RMS, FOR ONE<br>MINUTE.<br>LEAKAGE  |  | M                      |  |
|                   |  | ACT MA   |  |                        |  |
|                   |  | NO BREAKDOWN OF DIELECTRIC STRENGTH  |  |                        |  |
| 080               |  | REPAIR OR REPLACE AS NECESSARY.  |  | M                      |  |
| 090               |  | ROUTE BODY P/N 1043256 TO <u>MIPEN</u> BLDG<br>3001, POST P-32 FOR MACHINING. <u>MAT PCA</u>                             |  | M                      |  |
| 100               |  | REASSEMBLE.  |  | M                      |  |
| 110               |  | MEASURE DISTANCE FROM UPPER<br>SURFACE OF ARMATURE TO BODY<br>UPPER LAND SURFACE   |  | M                      |  |
|                   |  | P/N ACT IN   |  |                        |  |
| 120               |  | REQUIRED SPRING (5) WEIGHT   |  | M                      |  |
|                   |  | ACT: LBS   |  |                        |  |
| 130               |  | DISTANCE BETWEEN ARMATURE TOP<br>SURFACE AND BODY UPPER LAND SURF-<br>FACE   |  | M                      |  |
|                   |  | ACT: INCH  |  |                        |  |
| 140               |  | TURQUE SCREW (1)   |  | M                      |  |
|                   |  | ACT: IN/LBS  |  |                        |  |
| 150               |  | MEASURE DISTANCE FROM LOWER END OF<br>BODY SHOULDER TO BOTTOM OF SPRING<br>RECESS IN LOWER NEEDLE WITH PIN<br>INSTALLED. |  | M                      |  |
|                   |  | ACT: INCH  |  |                        |  |
| 160               |  | MEASURE DISTANCE FROM KNIFE EDGE<br>OF CAP TO TOP OF CAP THREAD SHOULDER   |  | M                      |  |
|                   |  | ACT: INCH  |  |                        |  |
| 170               |  | MEASURE DISTANCE FROM TOP OF CAP<br>THREAD SHOULDER TO BOTTOM OF<br>SPRING RECESS IN INSIDE OF CAP.                      |  | M                      |  |
|                   |  | ACT: INCH  |  |                        |  |
| 180               |  | COMPRESSED LENGTH OF LOWER<br>SPRING.  |  | M                      |  |

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| CAEBOS * WORK CONTROL DOCUMENT * JC         |   | 1. DATE 89033 PAGE 4 OF 4 PAGES |  |
| 15. DISF-16. FON/                           |   |                                 |  |
| STATION/OP NO. 117. WORK TO BE ACCOMPLISHED |   | 118. MECH 119 "P" 120 "Q"       |  |
| ACT:  |   |                                 |  |
| 290   | AFTO FORM 349 COMPLETED AND FORWARDED TO DATA AUTOMATION.   | M                               |  |
| 300   | SAFETY WIRE   | M                               |  |
| 310   | I CERTIFY THAT THIS END ITEM HAS BEEN OVERHAULED IAW T.O., TOTO CURRENT REVISIONS, SUPPLEMENTS & APPLICABLE PROCESS ORDERS. | M                               |  |
| 320   | OPERATIONS COMPLETE AND PAPERWORK PROCESSED   | M                               |  |
| 325   | COMPLY WITH MAOI 66-55, PARA 13   | M                               |  |
|   | TYPE WORK PERFORMED   |                                 |  |



1. EACH OF THE ABOVE DEFECTS DETERMINED TO BE A DEFECT UNDER THE  
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11. *Chrysomelidae* (10 spp.)

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| 41 | 42 | 43 | 44  |
| 45 | 46 | 47 | 48  |
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| 53 | 54 | 55 | 56  |
| 57 | 58 | 59 | 60  |
| 61 | 62 | 63 | 64  |
| 65 | 66 | 67 | 68  |
| 69 | 70 | 71 | 72  |
| 73 | 74 | 75 | 76  |
| 77 | 78 | 79 | 80  |
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| CAEC11 * WORK CONTROL DOCUMENT * 72-10 1. DATE 89045 PAGE 1 OF 6 PAGES!        |  |                             |  |  |  |                    |  |  |  |
| *****  |  |                             |  |  |  |                    |  |  |  |
| 2. ORIG/PROD NR 13. QUANTITY 14. PROD SECTION/RCC 15. DATE SCHED 16. DATE COMP |  |                             |  |  |  |                    |  |  |  |
| 98093A     MTPCAP   89094  |  |                             |  |  |  |                    |  |  |  |
| *****  |  |                             |  |  |  |                    |  |  |  |
| 7. CRT NUMBER  |  | 19. ITEM SERIAL NR          |  | 18/12. TECH DATA/OPTIONAL  |  |                    |  |  |  |
| 45317 (M)  |  | 1                           |  | PC MAT87-3   |  |                    |  |  |  |
|  |  |                             |  | SE1-8-8-3 ENG INST 87074H  |  |                    |  |  |  |
| 10. MODEL/DESIGN/SERIES  |  |                             |  | 11. STOCK NR   |  | CHG 21             |  |  |  |
| TF33-7   |  |                             |  | 2925004567627RV  |  | SE1-8-8-8-1 80007H |  |  |  |
|  |  |                             |  |  |  | CHG 3              |  |  |  |
| 13. MISC   |  | 14. NOUN/END ITEM NOUN      |  |  |  |                    |  |  |  |
|  |  | IGNITION EXCITER            |  | PAC TO   |  |                    |  |  |  |
|  |  | 530                         |  |  |  |                    |  |  |  |
|  |  | 530                         |  |  |  |                    |  |  |  |
| 15. OTSP-16. FON/  |  | 17. WORK TO BE ACCOMPLISHED |  | 18. MECH 19" F 20" Q   |  |                    |  |  |  |
| STATION OF NO.   |  |                             |  |  |  |                    |  |  |  |
| W-43   |  | 520                         |  | RECEIVE, IDENTIFY & ATTACH PAPERWORK   |  |                    |  |  |  |
|  |  |                             |  | M  |  |                    |  |  |  |
| ✓  |  | 015                         |  | ALL REFERENCES ARE TO THE BASIC T.O. AND APPLICABLE PROCESS ORDERS. TECH DATA CONTAINS DETAILED NOTES, CAUTIONS, WARNINGS, DIMENSIONS AND TOLERANCES REQUIRING COMPLIANCE. |  |                    |  |  |  |
|  |  | 525                         |  | M  |  |                    |  |  |  |
| ✓  |  | 020                         |  | DISASSEMBLE. <del>CONVERT</del>  |  |                    |  |  |  |
|  |  | 525                         |  | M  |  |                    |  |  |  |
| DELETE   |  | 025                         |  | REPAIR CASE ASSY. REQ. NOT REQ.  |  |                    |  |  |  |
|  |  |                             |  | M  |  |                    |  |  |  |
| ✓  |  | 030                         |  | CLEAN AS REQUIRED. (DO NOT WIPE OR BRUSH AWAY THE EXCESS SOLDER & DO NOT DAMAGE SOLDER COATING)  |  |                    |  |  |  |
|  |  | 530                         |  | M  |  |                    |  |  |  |
| ✓  |  | 040                         |  | INSPECT AS REQUIRED.   |  |                    |  |  |  |
|  |  |                             |  | M  |  |                    |  |  |  |
| ✓  |  | 060                         |  | CAPACITOR TEST: TEST SMALLER MULTIPLE CAPACITOR. GROUND "B" TERMINAL TO CASE. APPLY 5000VDC BETWEEN TERMINALS C, D & E AND CASE FOR NOT MORE THAN 30 SECONDS.              |  |                    |  |  |  |
|  |  | 540                         |  | M  |  |                    |  |  |  |
|  |  |                             |  | ACTUAL C. _____  |  |                    |  |  |  |
|  |  |                             |  | *TEST CONSOLE D. _____   |  |                    |  |  |  |
|  |  |                             |  | E. _____   |  |                    |  |  |  |
| ✓  |  | 560                         |  | APPLY 5000VDC BETWEEN TERMINALS "A" & "B" FOR NOT MORE THAN 30 SECONDS. ACT:   |  |                    |  |  |  |
|  |  |                             |  | REMOVE GROUND FROM "B" TERMINAL. SHRT "B" TERMINAL TO "A" TERMINAL & APPLY 5000VDC BETWEEN TERMINALS "A" & "B" & THE CASE FOR NOT MORE THAN 30 SECONDS. ACT:               |  |                    |  |  |  |
|  |  | 560                         |  |  |  |                    |  |  |  |
|  |  |                             |  | CHECK CAPACITANCE BETWEEN TERMINALS:   |  |                    |  |  |  |
|  |  | 570                         |  | A TO B _____ ACT: _____  |  |                    |  |  |  |
|  |  |                             |  | B TO C _____ ACT: _____  |  |                    |  |  |  |
|  |  |                             |  | C TO CASE _____ ACT: _____   |  |                    |  |  |  |
|  |  |                             |  | D TO CASE _____ ACT: _____   |  |                    |  |  |  |
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| CAEC11 * WORK CONTROL DOCUMENT * 72-10 1.DATE 89045 PAGE 2 OF 6 PAGES |  |  |  |                     |  |
| 15.DISP-16.PDN/   |  |  |  |                     |  |
| STATION/OP NO.  |  | 17.WORK TO BE ACCOMPLISHED   |  | 18.MECH 19"P" 20"Q" |  |
|   |  | E TO CASE ACT:   |  |                     |  |
|   |  | *CAPACITOR BRIDGE TESTER   |  |                     |  |
| 100<br>OP   |  | TEST LARGER MULTIPLE CAPACITOR BY<br>APPLYING 5000VDC BETWEEN TERMINALS<br>"A" & "C" FOR NOT MORE THAN 30 SEC.                             |  | M                   |  |
|   |  | ACTUAL   |  |                     |  |
|   |  | *TEST CONSOLE  |  |                     |  |
|   |  | WHILE SHORTING TERMINALS "A" & "C"   |  |                     |  |
|   |  | TOGETHER, APPLY 5000VDC BETWEEN TER-   |  |                     |  |
|   |  | MINALS "B" & "C" FOR NOT MORE THAN   |  |                     |  |
|   |  | 30 SECONDS.  |  |                     |  |
|   |  | ACT:   |  |                     |  |
|   |  | SHORT TERMINALS "A", "B" & "C" TOGE-   |  |                     |  |
|   |  | THER & APPLY 5000VDC BETWEEN TERMIN-   |  |                     |  |
|   |  | ALS & CASE.  |  |                     |  |
|   |  | ACT:   |  |                     |  |
|   |  | CHECK CAPACITANCE FROM TERMINAL "A"  |  |                     |  |
|   |  | TO "C" & FROM TERMINALS "C" TO "B"   |  |                     |  |
|   |  | ACT: A TO C  |  |                     |  |
|   |  | ACT: C TO B  |  |                     |  |
|   |  | *CAPACITOR BRIDGE TESTER   |  |                     |  |
| 160<br>010  |  | FILTER TEST: APPLY 400VDC BETWEEN<br>LONGER OUTPUT TERMINAL & GROUND,<br>WHILE "C" PIN IS GROUNDED. THERE<br>MUST BE NO SIGN OF BREAKDOWN. |  | M                   |  |
|   |  | *TEST CONSOLE  |  |                     |  |
|   |  | APPLY 600VDC BETWEEN SHORTER OUTPUT  |  |                     |  |
|   |  | TERMINAL & GROUND, WHILE "B" PIN IS  |  |                     |  |
|   |  | GROUNDED. THERE MUST BE NO SIGN OF   |  |                     |  |
|   |  | BREAKDOWN.   |  |                     |  |
|   |  | CHECK LEAKAGE BETWEEN SHORTER OUTPUT   |  |                     |  |
|   |  | TERMINAL & GROUND, WHILE "B" PIN IS  |  |                     |  |
|   |  | GROUNDED: THEN CHECK LEAKAGE BETWEEN   |  |                     |  |
|   |  | LONGER OUTPUT TERMINAL & GROUND  |  |                     |  |
|   |  | WHILE "C" PIN IS GROUNDED.   |  |                     |  |
|   |  | ACT: ACT:  |  |                     |  |
|   |  | *VACUUM TUBE VOLTMETER   |  |                     |  |
|   |  | MEASURE CAPACITANCE BETWEEN SHORTER  |  |                     |  |
|   |  | OUTPUT TERMINAL & GROUND   |  |                     |  |
|   |  | ACT:   |  |                     |  |
|   |  | *CAPACITOR BRIDGE TESTER   |  |                     |  |
|   |  | BETWEEN LONGER FILTER OUTPUT TERMIN-   |  |                     |  |
|   |  | AL & GROUND  |  |                     |  |
|   |  | ACT:   |  |                     |  |
| 210   |  | RESISTOR TEST: RESISTORS (6)   |  | M                   |  |
| 220   |  | (6) ACTUAL   |  |                     |  |
|   |  | *VACUUM TUBE VOLTMETER   |  |                     |  |
|   |  | ACTUAL   |  | M                   |  |
| (CONTINUED)   |  |  |  |                     |  |



| *****  |     |                                      |      |          |               |
|--|-----|--------------------------------------|------|----------|---------------|
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| 15. DISP-16. PDN/  |     |                                      |      |          |               |
| STATION/ OF NO.  |     | 17. WORK TO BE ACCOMPLISHED          |      | 18. MECH | 19 "P" 20 "Q" |
|  |     | RESISTOR (10)                        |      |          |               |
|  |     | ACTUAL                               |      |          |               |
|  | 270 | AC RECT. TEST:                       | 6 n' |          |               |
|  |     | ADJUST VOLTAGE TO 4000V & READ IN-   | M    |          |               |
|  |     | VERSE VOLTAGE CURRENT ON SAME METER  |      |          |               |
|  |     | BY PUSHING BUTTON MARKED "500UA".    |      |          |               |
|  |     | 3952                                 |      |          |               |
|  |     | ACTUAL                               |      |          |               |
|  |     | *VOLTAGE REGULATOR                   |      |          |               |
|  |     | RAISE VOLTAGE UNTIL MILLIAMETER      |      |          |               |
|  |     | SHOWS A READING OF 100MA. READ       |      |          |               |
|  |     | VOLTAGE DROP ACROSS RECTIFIER        |      |          |               |
|  |     | ACT                                  |      |          |               |
|  | 290 | TUBE P/N 85944                       |      |          |               |
|  |     | DISCHARGER TUBE TEST: ALLOW DIS-     | M    |          |               |
|  |     | CHARGER TUBE TO FIRE FOR 4 MINUTES,  |      |          |               |
|  | 090 | THEN DURING SUCCEEDING 1 MINUTE      |      |          |               |
|  |     | PERIOD OBSERVE BREAKDOWN VOLTAGE.    |      |          |               |
|  |     | ACTUAL                               |      |          |               |
|  |     | *TEST CONSOLE                        |      |          |               |
|  | 300 | TUBE P/N 24222:                      |      |          |               |
|  |     | ADJUST HIGH VOLTAGE REGULATOR UNTIL  | M    |          |               |
|  | 090 | TUBE IS FIRING AT A RATE OF 1 SPARK  |      |          |               |
|  |     | PER SECOND; THEN DURING THE SUCCEED- |      |          |               |
|  |     | ING 30 SECOND PERIOD OBSERVE THE     |      |          |               |
|  |     | BREAKDOWN VOLTAGE.                   |      |          |               |
|  |     | ACTUAL                               |      |          |               |
|  | 310 | TUBE P/N 24498:                      |      |          |               |
|  | 090 | VALUE OF BREAKDOWN VOLTAGE OF TUBE   | M    |          |               |
|  |     | UNDER TEST OVER A PERIOD OF 1 MINUTE |      |          |               |
|  |     | ACTUAL                               |      |          |               |
|  |     | ACTUAL                               |      |          |               |
|  | 320 | FEED-THRU TERMINAL TEST: APPLY 5000V |      |          |               |
|  | 180 | DC BETWEEN TERMINAL & CASE, LEAKAGE  | M    |          |               |
|  |     | ACTUAL                               |      |          |               |
|  | 330 | HIGH TENSION TRANSFORMER TEST: SET   |      |          |               |
|  |     | UP IGNITION OUTPUT TESTER & ADJUST   | M    |          |               |
|  |     | FOR GAP OF 0.200 IN & INTERNAL PRES- |      |          |               |
|  |     | SURE OF 20 PSIG.                     |      |          |               |
|  |     | OC 3953                              |      |          |               |



15.DISP-16.PDN/

STATION/OP NO. 117.WORK TO BE ACCOMPLISHED

18.MECH 19"P" 20"Q"

|                       |   |   |              |
|-----------------------|---|---|--------------|
| 350                   | SMALL TRANSF TEST:<br>CHECK CONTINUITY BETWEEN "C" & "A"<br>LEADS AND BETWEEN "C" & "B" LEADS.  | M | 6 MIN        |
| <del>360</del><br>110 | POWER TRANSF TEST:<br>APPLY 80V, 400 CYCLE AC, BETWEEN<br>PRIMARY TERMINAL & GROUND. READ<br>EXCITING CURRENT<br><br>ACTUAL<br>SHORT SECONDARY TERMINALS TOGETHER &<br>APPLY 2000 VDC BETWEEN PRIMARY &<br>SECONDARY TERMINALS FOR 30 SECONDS.<br>THERE MUST BE NO EVIDENCE OF<br>ELECTRICAL BREAKDOWN.   | M |              |
| <del>380</del><br>120 | JAW CHOPPER TEST (PER T.O. PG 4-17)   | M |              |
| <del>400</del><br>380 | REPAIR OR REPLACE AS NECESSARY.   | M |              |
| 415                   | HIGH TENSION TRANSF<br>RAISE PRESSURE TO 25PSIG & SUBMERGE<br>UNIT IN WATER. LEAK CHECK FOR<br>BUBBLES.   | M | 12 M         |
| 450                   | REMOVE ADAPTER & BAKE ASSY IN OVEN<br>2 HRS AT A TEMP OF 250 DEG F TO RE-<br>MOVE ALL TRACES OF MOISTURE.   | M | 6M 2 HR FLOW |
| <del>480</del><br>390 | REASSEMBLE.   | M |              |
| <del>490</del><br>390 | LAY A NEW GROUNDING BRAID (14) IN<br>GROOVE IN CAP (13), MAKING CERTAIN<br>IT LIES DEEP IN GROOVE TO PREVENT<br>FRAYING OR PINCHING WHEN CAP IS<br>SCREWED ON. TORQUE CAP<br>ACTUAL<br>*TORQUE WRENCH   | M |              |
| <del>500</del><br>460 | INTERMEDIATE TEST:<br>STORAGE CAPACITOR: TEST HIGH VOLTAGE<br>LEAD ON "A" TERMINAL OF LARGER MULT-<br>IPLE CAPACITOR, RAISE INPUT VOLTAGE<br>TO 14V FOR NOT MORE THAN 10 SECONDS.<br><br>ACTUAL<br>*TEST CONSOLE<br>APPLY INPUT VOLTAGE SUCCESSIVELY AT<br>14, 24, & 29 V. AT A RATE OF NOT LESS<br>THAN 5.0 SPARKS OVER A 10-SEC PERIOD<br>& READ INPUT CURRENT ON TEST CONSOLE<br>(14) ACT _____ S/R ACT _____ AMPS<br>(24) ACT _____ S/R ACT _____ AMPS<br>(29) ACT _____ S/R ACT _____ AMPS<br>READ STORAGE CAPACITOR VOLTAGE ON<br>(CONTINUED) | M |              |



| STATION | OF NO.                  | 17. WORK TO BE ACCOMPLISHED   | 18. MECH | 19 "P" | 20 "Q" |
|---------|-------------------------|---|----------|--------|--------|
|         |                         | VOLTASCOPE<br>ACT: _____ VOLTS<br>READ INPUT CURRENT & SPARY RATE IN WINDOW OF OUTPUT TESTER CONNECTED TO LEFT OUTPUT.<br><br>ACT: _____ AMPS ACT: _____ S/R                    |          |        |        |
|         | <del>510</del><br>520   | PREPARE UNIT FOR FILLING WITH POTTING COMPOUND BY PRE-BAKING FOR AT LEAST 1 HR AT 300 DEG F.  | M        |        |        |
|         | <del>550</del><br>520   | BAKE EXCITER IN CIRCULATING AIR OVEN AT LEAST 2 HRS AT TEMP OF 225 DEG F. RAISE TEMP TO 300 DEG & CURE 4 HRS.   | M        |        |        |
|         | <del>500</del><br>525   | SOLDER & TORQUE FILTER ATTACHING JAM NUT<br>ACTUAL _____ IN/LBS<br>*TORQUE WRENCH   | M        |        |        |
|         | <del>565</del><br>525   | WHILE APPLYING HEAT TO FLOW SOLDER, TORQUE SLOWLY. FILL SLOTS IN SCREW HEADS WITH SOLDER<br><br>6-32 ACT _____ 8-32 ACT _____<br>*TORQUE WRENCH                                 | M        |        |        |
|         | <del>570</del><br>530   | PRESSURE TEST: TEST FOR LEAKS USING PROBE WITH 15 PSIG IN EXCITER WITH HELIUM. (ALT LEAK CHECK IN WATER)<br><br>ACTUAL _____<br>*VEECO LEAK DETECTOR                            | M        |        |        |
|         | <del>500</del><br>540   | GAS CHARGING: SET THERMOSTAT AT 290 DEG F; BAKE EXCITER 15 MIN AT THIS TEMP. TURN ON VACUUM PUMP SWITCH & EXHAUST EXCITER WHILE CONTINUING TO BAKE FOR AN ADDITIONAL 15 MINUTE. | M        |        |        |
|         | <del>560</del><br>560   | *GAS CHARGING FIXTURE   |          |        |        |
| W-41    | <del>590</del><br>MTPCA | MOVE EXCITER TO PAINT SHOP.   | M        |        |        |
|         | <del>595</del><br>560   | PAINT<br>BAKE IN OVEN FOR 1 HR AT A TEMP OF 250 DEG F.  | M        |        |        |
|         | <del>610</del><br>570   | FINAL TEST<br>RAISE INPUT VOLTAGE TO 24V.<br>RAD INPUT CURRENT & METER READING ON TESTER  | M        |        |        |

(CONTINUED)



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|---|--|---------|-------------|
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| STATION/OP NO.  | 17.WORK TO BE ACCOMPLISHED   | 18.MECH | 19"P" 20"Q" |
|   | ACT: _____ ACT _____<br>*TEST CONSOLE<br>PUSH "COUNTER RESET" BUTTON & READ<br>RATE ON COUNTER.<br>ACT: _____ S/R<br>RAISE INPUT VOLTAGE TO 115V AT 400<br>CYCLES. READ INPUT CURRENT & METER<br>READING ON TESTER<br>ACT: _____ ACT: _____<br>RAISE VOLTAGE 115V AT 400 CYCLES &<br>PUSH "COUNTER RESET" BUTTON TO READ | ✓       |             |
| 670<br>SAME   | AFTO FORM 349 COMPLETED & FORWARDED<br>TO DATA AUTOMATION.   | M       |             |
| 680<br>650  | SAFETY WIRE  | M       |             |
| 690<br>660  | I CERTIFY THAT THIS END ITEM HAS<br>BEEN OVERHAULED IAW T.O., TOTO<br>CURRENT REVISIONS AND SUPPLEMENTS  | M       |             |
| 700<br>+  | OPERATIONS COMPLETED AND PAPERWORK<br>PROCESSED  | M       |             |
| 710<br>680  | COMPLY WITH MAOI 66-36, PARA 13<br>TYPE WORK PERFORMED _____   | M       |             |